QUARTZ SYNTHESIZER AM-FM STEREO TUNER

KT-593/593S/1050L

SERVICE MANUAL

KENWOOD

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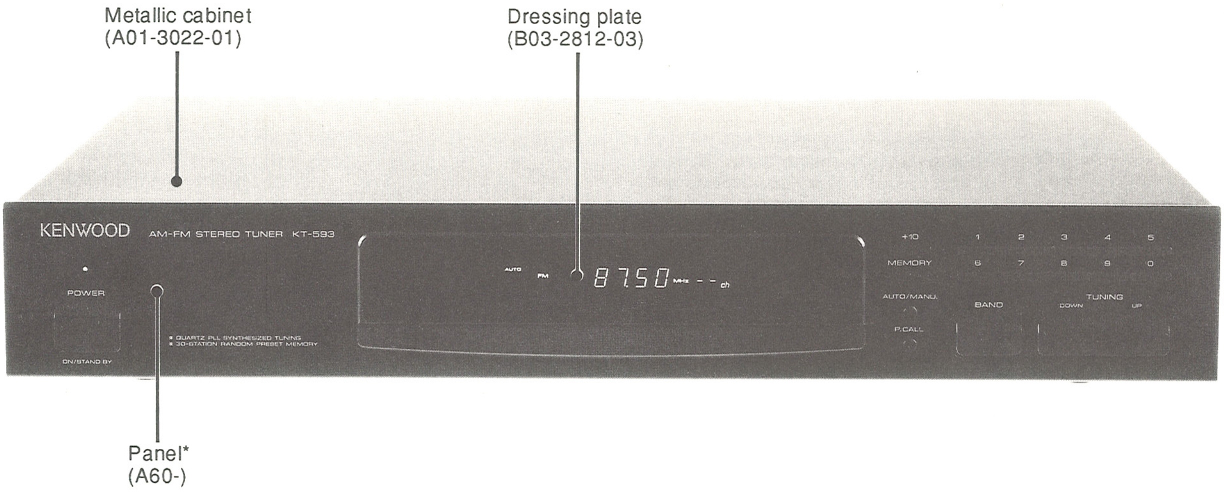
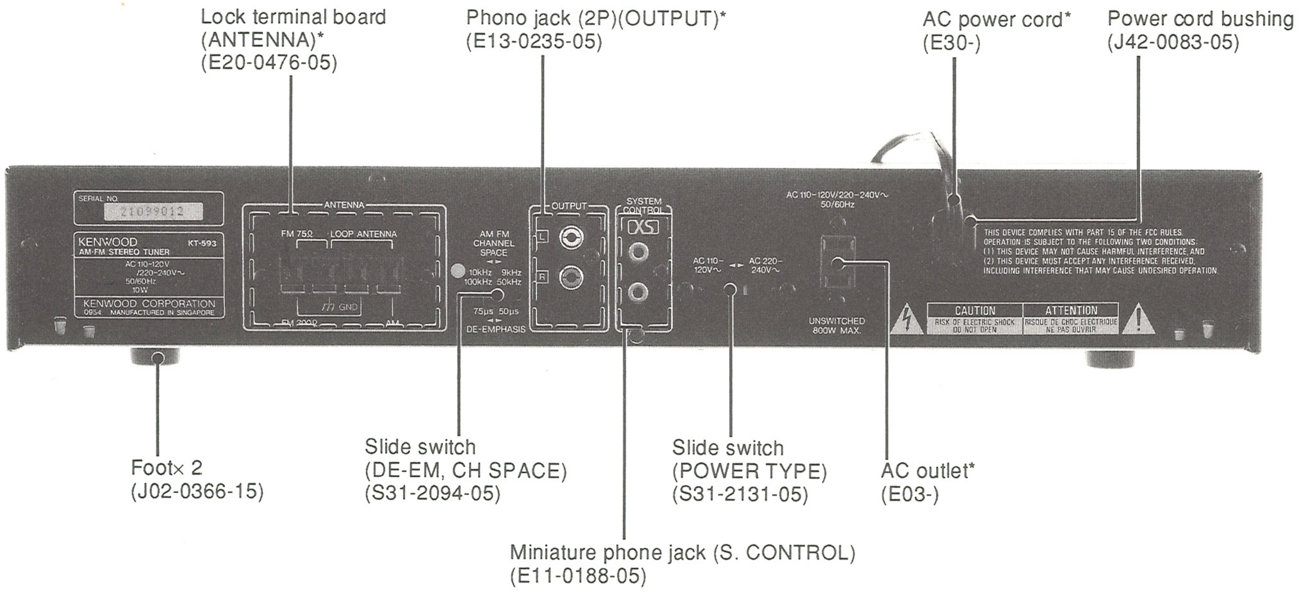
B51-4683-00 (S) 4219


Metallic cabinet
(A01-3022-01)
Dressing plate
(B03-2812-03)
KENWOOD
AM-FM STEREO TUNER KT-593
POWER
ON/STAND BY
8750 MHz
MEMORY
AUTO/MANU.
P.CALL
BAND
TUNING
DOWN
UP
Panel*
(A60-)


Lock terminal board
(ANTENNA)*
(E20-0476-05)
Phono jack (2P)(OUTPUT)*
(E13-0235-05)
AC power cord*
(E30-)
Power cord bushing
(J42-0083-05)
ANTENNA
FM 75Ω
LOOP ANTENNA
OUTPUT
SYSTEM CONTROL
AM FM CHANNEL SPACE
10kHz 9kHz
100kHz 50kHz
75µs 50µs
DE-EMPHASIS
AC 110-120V/220-240V~
50/60Hz
UNSWITCHED
800W MAX.
CAUTION
ATTENTION
KENWOOD CORPORATION
Foot× 2
(J02-0366-15)
Slide switch
(DE-EM, CH SPACE)
(S31-2094-05)
Slide switch
(POWER TYPE)
(S31-2131-05)
AC outlet*
(E03-)
Miniature phone jack (S. CONTROL)
(E11-0188-05)

KT-593 : K, P, Y, X type
KT-593S : M type

* Refer to parts list on page 31.

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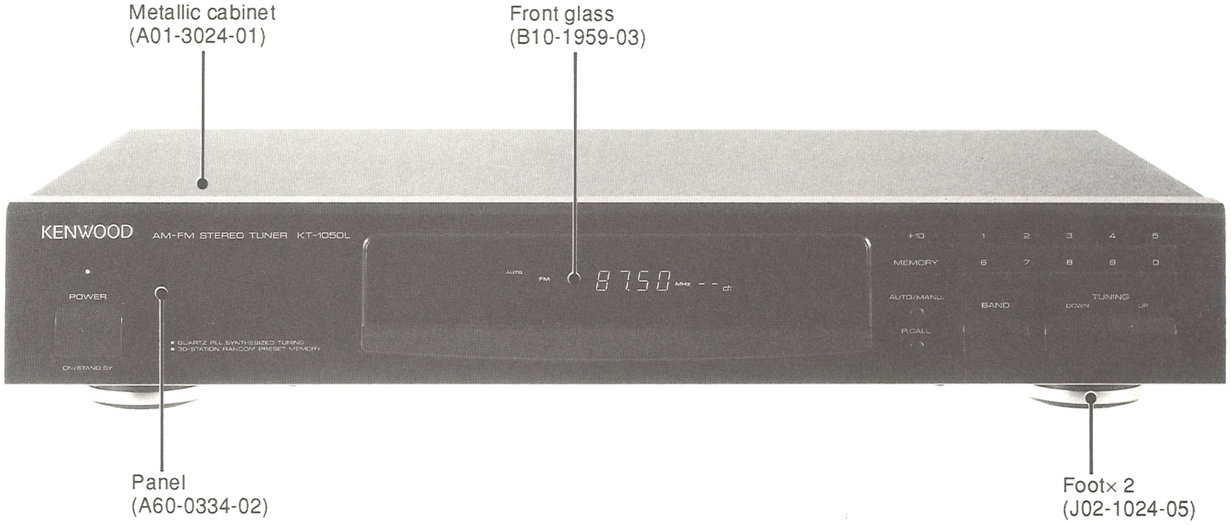
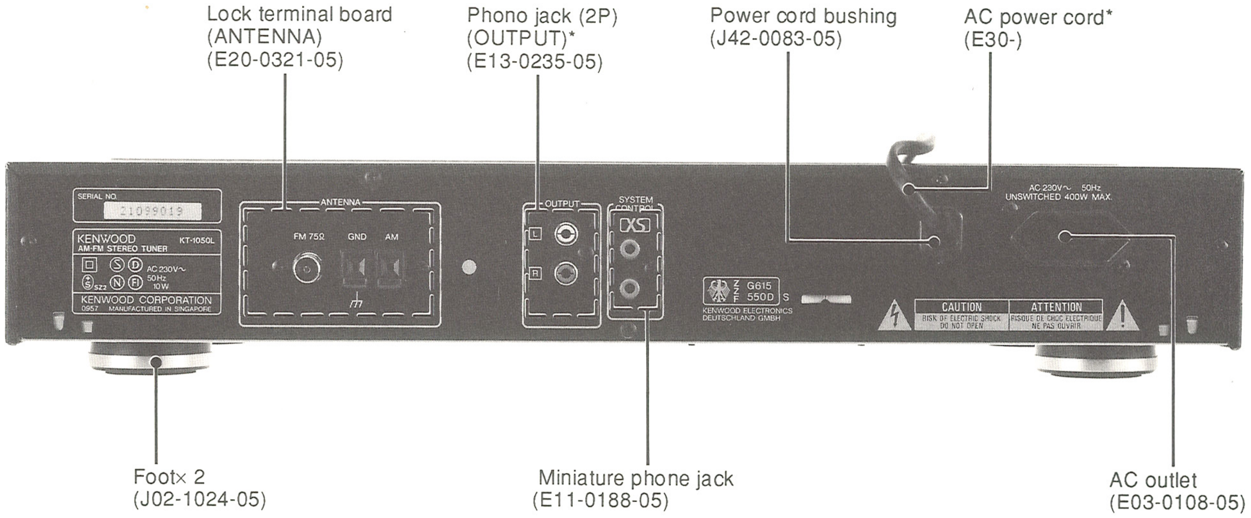


Metallic cabinet
(A01-3024-01)
Front glass
(B10-1959-03)
KENWOOD
AM-FM STEREO TUNER KT-1050L
POWER
87.50
MEMORY
BAND
TUNING
Panel
(A60-0334-02)
Foot× 2
(J02-1024-05)



Lock terminal board
(ANTENNA)
(E20-0321-05)
Phono jack (2P)
(OUTPUT)*
(E13-0235-05)
Power cord bushing
(J42-0083-05)
AC power cord*
(E30-)
ANTENNA
FM 75Ω
GND
AM
OUTPUT
SYSTEM CONTROL
CAUTION
ATTENTION
Foot× 2
(J02-1024-05)
Miniature phone jack
(E11-0188-05)
AC outlet
(E03-0108-05)

[KT-1050L : T, E type]

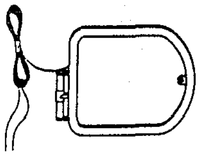
* Refer to parts list on page 31.

ACCESSORIES

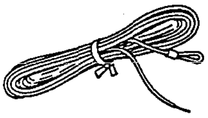
	JAPAN MADE	SINGAPORE MADE	MALAYSIA MADE	FRANCE MADE
KT-593	X05-4362-92(Y)	X05-4360-10(K, P) X05-4360-71(X) X05-4362-91(Y)	X05-4360-10(K,P)	
KT-593S	X05-4380-21(M)	X05-4380-20(M)		
KT-1050L		X05-4360-51(T) X05-4362-71(E)		X05-4362-72(E)

ACCESSORIES

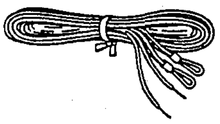
LOOP ANTENNA
(T90-0153-05): FRANCE MADE
(T90-0173-05): JAPAN MADE
(T90-0174-05): JAPAN, SINGAPORE, MALAYSIA MADE



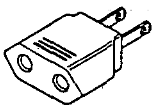
LEAD WIRE ANTENNA
(T90-0182-15): KT-593/593S



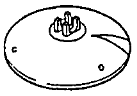
T TYPE ANTENNA
(T90-0175-05): KT-1050L



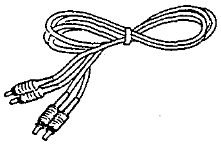
AC PLUG ADAPTOR
(Except for some areas)
(E03-0115-05); M



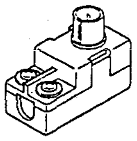
ANTENNA HOLDER
(J19-2815-04)



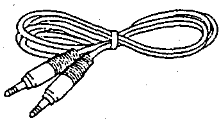
AUDIO CORD
(E30-0505-05): KT-1050L
(E30-0615-05): KT-593/593S



ANTENNA ADAPTOR
(T90-0185-05): E, T

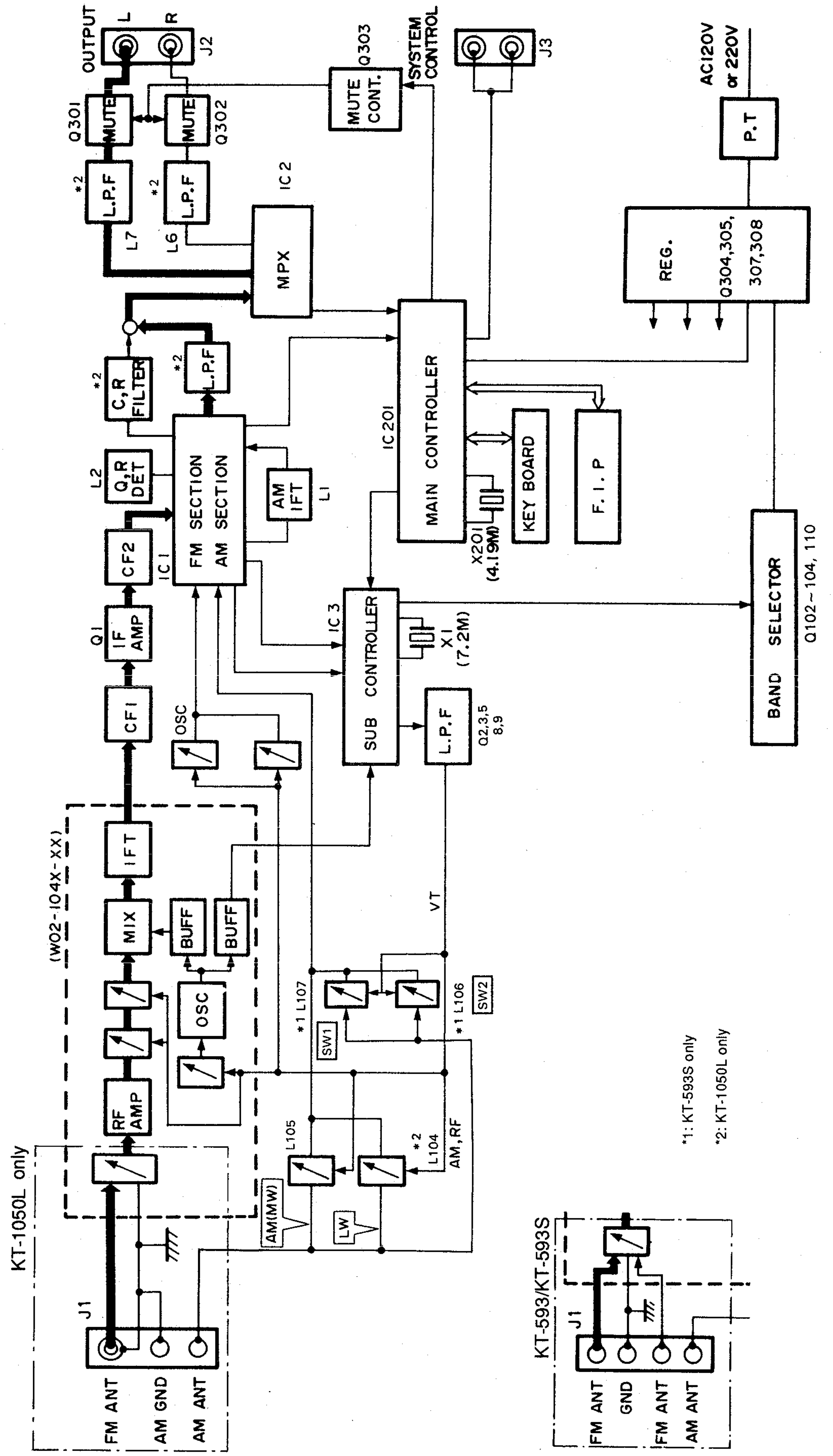


SYSTEM CONTROL CORD
(E30-2733-05)



KT-593/593S/1050L

BLOCK DIAGRAM



OUTPUT
L
R
J2
Q301
MUTE
MUTE
Q302
Q303
MUTE CONT.
SYSTEM CONTROL
J3
AC120V or 220V
P.T
*2
L.P.F
L7
*2
L.P.F
L6
IC2
MPX
REG.
Q304,305, 307,308
*2
C,R FILTER
*2
L.P.F
MAIN CONTROLLER
IC201
KEY BOARD
F. I. P
X201 (4.19M)
L2
Q,R DET
FM SECTION
AM SECTION
IC1
AM IFT
L1
CF2
Q1
IF AMP
IC3
SUB CONTROLLER
X1 (7.2M)
BAND SELECTOR
Q102~104, 110
CF1
OSC
L.P.F
Q2,3,5 8,9
(W02-104X-XX)
IFT
MIX
BUFF
BUFF
VT
OSC
RF AMP
*1 L107
SW1
*1 L106
SW2
L105
*2
L104
AM,RF
AM(MW)
LW
KT-1050L only
J1
FM ANT
AM GND
AM ANT
KT-593/KT-593S
J1
FM ANT
GND
FM ANT
AM ANT
*1: KT-593S only
*2: KT-1050L only

CIRCUIT DESCRIPTION

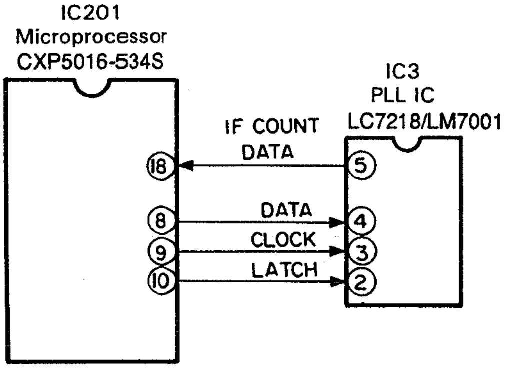
1. FEATURES

(1) Receiving bands

The unit is capable of receiving five bands; FM, AM (MW), LW, SW1 and SW2. The PLL IC is either LC7218 or LM7001 depending on whether SW (short wave) bands is to be received or not.

For details, refer to the table showing models according to the destinations (Table 1).

(2) IF count (when LC7218 is used)



When microcomputer pin SD goes low after the microcomputer has sent frequency data to the PLL, the IF count start data is sent to the PLL, which then starts counting the IF.

When the microcomputer receives the IF count end signal from the PLL, the microcomputer reads IF count data from the PLL.

For MW/SW reception, the microcomputer identifies the receiving condition when the data becomes 450 kHz, sends the frequency data again to the PLL, and turns MUTING OFF in 0.5 second.

The TUNED indicator is lighted when the IF count result becomes OK.

IF counting is performed twice during auto tuning.

(3) Auto tuning

The auto tuning starts when the UP or DOWN key is pressed while the AUTO indicator is lighted.

MUTING is set to ON during tuning.

Frequencies are scanned upward or downward at a rate of about 125 ms/step (or 500 ms/step at band edges) until the tuned condition (*), in which the scanning stops. (Pressing the UP key during upward tuning or pressing the DOWN key during downward tuning is invalid.)

MUTING is turned OFF in 0.5 second after the tuning has stopped.

(*) Tuned condition

Condition in which there is a broadcasting station and it is being received.

With LM7001 (PLL), the TUNED indicator lights up and tuned condition starts when pin SD goes Low.

With LC7218 (PLL), the tuned condition starts in the same way as with LM7001 for the FM band. For the MW/SW bands, the tuned condition starts following the process described in "(2) IF count" above.

(4) Manual tuning

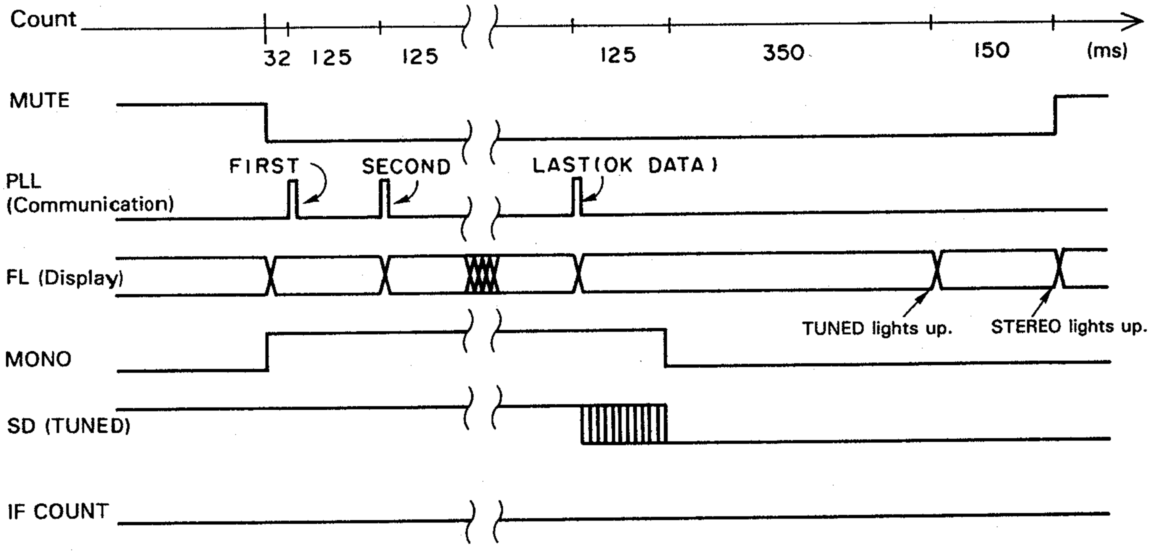
When the "AUTO" display is off, when the UP or DOWN key is pressed, the tuning operation goes in the direction of increasing or decreasing frequency at a rate of one step per key pressure.

When the UP or DOWN key is pressed continuously for more than 0.5 sec, the tuning operation continues in the direction of increasing or decreasing direction at a rate of 125 mses/step irrespective of the SD terminal level until the key is released from the finger pressure, after which 0.5 sec later, muting is turned OFF.

2. TIMING CHART

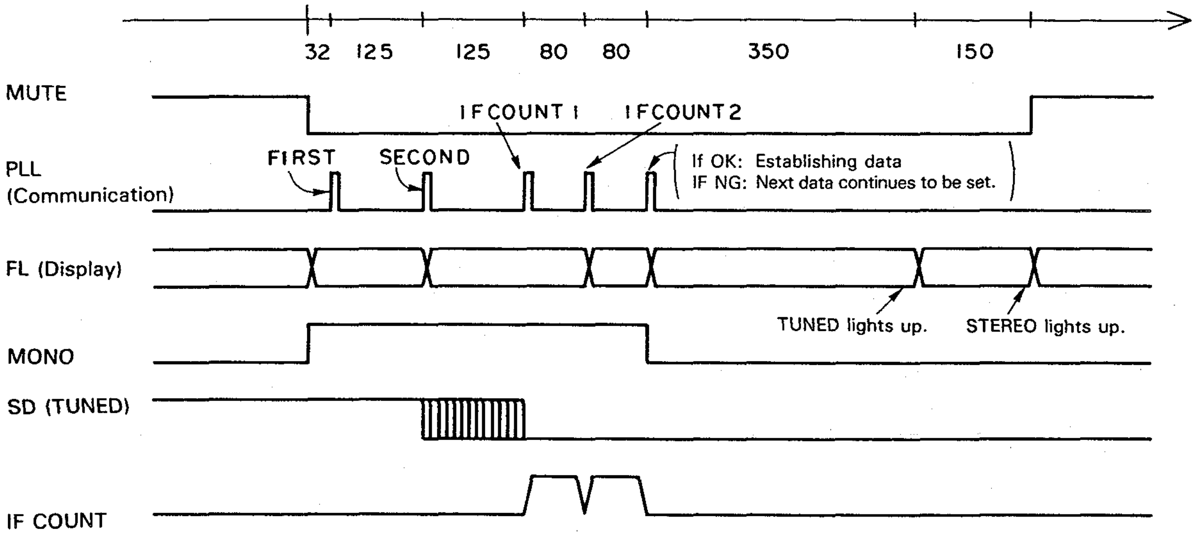
Auto tuning

(1) No IF Count



CIRCUIT DESCRIPTION

(2) With IF count


32
125
125
80
80
350
150
MUTE
IF COUNT 1
IF COUNT 2
PLL
(Communication)
FIRST
SECOND
If OK: Establishing data
IF NG: Next data continues to be set.
FL (Display)
TUNED lights up.
STEREO lights up.
MONO
SD (TUNED)
IF COUNT

3. Conditions by destination

Destination		Destination switches				Band	Receiving frequency range	Inter-channel space (Hz)	IF	RF (Hz)	PLL (IC)
		3	2	1	0						
KT-593	K, P	0	0	0	0	FM AM	87.5 ~ 108.0 MHz 530 ~ 1700 kHz	100k 10k	+10.7MHz +450 kHz	50k 10k	LM7001
	X Y *1	0	X: 1 Y: 1 or 0	1	0	FM AM FM AM	87.5 ~ 108.0 MHz 530 ~ 1610 kHz 87.5 ~ 108.0 MHz 531 ~ 1603 kHz	100k 10k 50k 9k	+10.7MHz +450kHz +10.7MHz +450kHz	50k 10k 50k 9k	LM7001
KT-593S	M *1	1	1 or 0	1	0	FM MW SW1 SW2	87.5 ~ 108.0 MHz 531 ~ 1603 kHz 3.2 ~ 7.3 MHz 9.5 ~ 21.85 MHz	50k 9k 5k 5k	+10.7MHz +450kHz +450kHz +450kHz	50k 9k 5k 5k	LC7218
KT-1050L	T, E	0	1	0	1	FM MW LW	87.5 ~ 108.0 MHz 531 ~ 1602 kHz 153 ~ 281 kHz	50k 9k 1k	+10.7MHz +450kHz +450kHz	50k 9k 1k	LM7001

(Table 1)

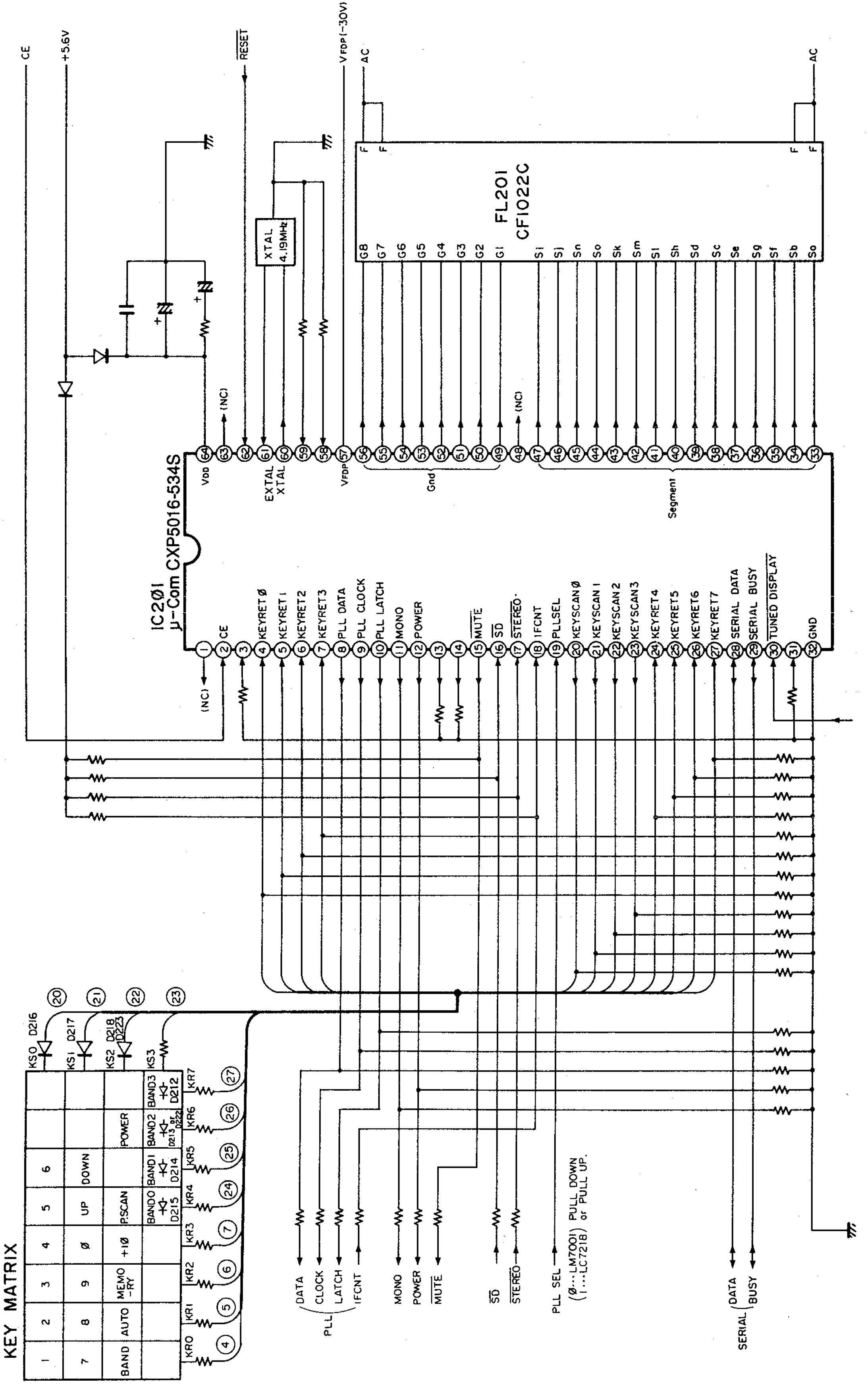
BAND Selection

BAND3:	With SW:1	Without SW: 0	(D212)
BAND2:	STEP 9k/50k:1	10k/100k:0	(D222 with switch or D213)
BAND1:	AM Narrow: 1	AM Wide:0	(D214)
BAND0:	With LW: 1	Without LW: 0	(D215)

*1 Y and M types select 1 or 0 using Switch. (1: 9k/50k 0: 10k/100k)

CIRCUIT DESCRIPTION

4. IC201: CXP5016-534S MICROPROCESSOR


CE
+5.6V
RESET
VFDP(-30V)
AC
AC
FL201
CF1022C
F
G8
G7
G6
G5
G4
G3
G2
G1
Si
Sj
Sn
So
Sk
Sm
Sl
Sh
Sd
Sc
Se
Sg
Sf
Sb
Sa
XTAL
4.19MHz
(NC)
(NC)
(NC)
IC201
μ-Com CXP5016-534S
VDD
EXTAL
XTAL
VFDP
Gnd
Segment
CE
KEYRET0
KEYRET1
KEYRET2
KEYRET3
PLL DATA
PLL CLOCK
PLL LATCH
MONO
POWER
MUTE
SD
STEREO
IFCNT
PLLSEL
KEYSCAN0
KEYSCAN1
KEYSCAN2
KEYSCAN3
KEYRET4
KEYRET5
KEYRET6
KEYRET7
SERIAL DATA
SERIAL BUSY
TUNED DISPLAY
GND
KEY MATRIX
KS0
D216
KS1
D217
KS2
D218
D223
KS3
KR0
KR1
KR2
KR3
KR4
KR5
KR6
KR7
1
2
3
4
5
6
7
8
9
0
UP
DOWN
BAND
AUTO
MEMO-RY
+10
P.SCAN
POWER
BAND0
D215
BAND1
D214
BAND2
D213 or D222
BAND3
D212
DATA
CLOCK
LATCH
PLL
IFCNT
MONO
POWER
MUTE
SD
STEREO
PLL SEL
(0…LM7001 / 1…LC7218) PULL DOWN or PULL UP.
DATA
BUSY
SERIAL

CIRCUIT DESCRIPTION

Pin functions

Pin No.	Pin name	I/O	Name	Operation description
1	PWM/PY1	O		No used
2	WP/PY2	I	$\overline{\text{CE}}$	Chip enable pin. Active low
3	RMC/EC/PY3	O		No use
4~7		I	KR0~KR3	Key return input. KR0~KR3
8	PD0	O	PLLDT	PLL DATA output
9	PD1	O	PLLCK	PLL CLOCK output
10	PD2	O	PLLCE	PLL CE output
11	PD3	O	PMONO	Forced MONO output H: ON L: OFF
12	PC0	O	PPOWER	Power ON/OFF control H: ON L: OFF
13,14		O		No used
15	PC3	O	$\overline{\text{PMUTE}}$	Line mute Active low
16	PEC	I	$\overline{\text{PSD}}$	SD pin Active low
17	PF1	I	$\overline{\text{PSTEREO}}$	Stereo signal input H: MONO L: STEREO
18	PF2	I	PIFCNT	IF COUNT pin. On when IF count is finised
19	PF3	I	PLLSEL	PLL select pin H: LC7218 L: LM7001
20~23	PE0~PE3	O	KS0~KS3	Key scan output KS0~KS3
24~27	PB0~PB3	I	KR4~KR7	Key return input KR4~KR7
28	PA0	I/O	SDATA	System control DATA
29	PA1	I/O	SBUSY	System control BUSY
30	PA2	I	$\overline{\text{PSDD DISP}}$	"TUNED" display pin. Active low
31	PA3	I		No used
32	Vss	—	GND	GND pin
33~48		O	Sa~Sn	FDP segment Sa~Sn
49~56		O	G1~G8	FDP grid G1~G8
57	VFDP	—	VFDP	−30 V
58,59		I		No used
60	XTAL	O		Quartz oscillator output.
61	EXTAL	I		Quartz oscillator input.
62	RST	I	$\overline{\text{RESET}}$	Forced reset pin. Active low
63	PY0	O		No used.
64	VDD	—	VDD	Power supply.

5. Initial status setting (reset)

(1) Method of setting

While pressing the MEMORY key, turn AC ON.

(2) Contents

① POWER: OFF
② MUTE: ON
③ Forced MONO: OFF
④ FL display: All off
⑤ State: RAM state = All clear
Tuning mode = AUTO
Memory = Test frequency (Table 2)
Last band = FM
Last frerquency = Lowermost limit of each band.
Last P. CH = ⌈-- ch⌋

(3) Test frequency

P. ch	KT-593		KT-593S	KT-1050L
	FM 50 k/AM 9k	FM 100 k/AM 10 k	With SW	With LW
01 ch	FM 98.0MHz	FM 98.0MHz	FM 98.0MHz	FM 98.0MHz
02 ch	FM 108.0MHz	FM 108.0MHz	FM 108.0MHz	FM 108.0MHz
03 ch	AM 630 kHz	AM 620 kHz	AM 620 kHz	AM 620 kHz
04 ch	AM 990 kHz	AM 990 kHz	AM 990 kHz	AM 990 kHz
05 ch	AM 1440 kHz	AM 1440 kHz	AM 1440 kHz	AM 1440 kHz
06 ch	AM 1602 kHz	AM 1610 kHz	AM 1610 kHz	AM 1610 kHz
07 ch	FM 87.5MHz	AM 1700 kHz (FM 87.5 MHz)	FM 87.5MHz	LW 162 kHz
08 ch	FM 87.5MHz	FM 87.5MHz	SW1 5.0MHz	LW 216 kHz
09 ch	FM 87.5MHz	FM 87.5MHz	SW2 15.0MHz	LW 270 kHz
10 ch	FM 89.1MHz	FM 89.1MHz	FM 89.1MHz	FM 89.1MHz
11 ch	FM 87.5MHz	FM 87.5MHz	SW1 3.2MHz	LW 281 kHz
12 ch	FM 87.5MHz	FM 87.5MHz	SW1 3.5MHz	FM 87.5MHz
13 ch	FM 87.5MHz	FM 87.5MHz	SW1 5.0MHz	FM 87.5MHz
14 ch	FM 87.5MHz	FM 87.5MHz	SW1 6.8MHz	FM 87.5MHz
15 ch	FM 87.5MHz	FM 87.5MHz	SW1 7.3MHz	FM 87.5MHz
16 ch	FM 87.5MHz	FM 87.5MHz	SW2 9.5MHz	FM 87.5MHz
17 ch	FM 87.5MHz	FM 87.5MHz	SW2 10.0MHz	FM 87.5MHz
18 ch	FM 87.5MHz	FM 87.5MHz	SW2 15.0MHz	FM 87.5MHz
19 ch	FM 87.5MHz	FM 87.5MHz	SW2 18.5MHz	FM 87.5MHz
20 ch	FM 87.5MHz	FM 87.5MHz	SW2 21.85 MHz	FM 87.5MHz

(Table 2)

6. Test mode

(1) Method of setting

While holding the DOWN key depressed, plug the AC power cord to the power outlet.

(2) Display of test mode

When the test mode is set, all FL tubes are lit up. The FL tubes are kept lit until there is a key entry which results in a change of the FL frequency display.

(3) Operations in test mode

The operations are basically the same as in normal operation modes. Only difference lies in the processing accompanying the +10 key and 0 key (numeric keys).

Namely, the preset channel definition method using the +10 key and numeric keys is different in the test mode. The preset channels are divided into three groups as shown below.

{01 ch - 10 ch/0 - ch/-- ch} : Group 1
{11 ch - 20 ch/1 - ch } : Group 2
{21 ch - 30 ch/2 - ch } : Group 3

When the current channel is in group 1, the 1 to 9 keys represent "01 ch" to "09 ch", and the 0 key represent "10 ch". Change from group 1 to another group does not occur until the +10 key is pressed.

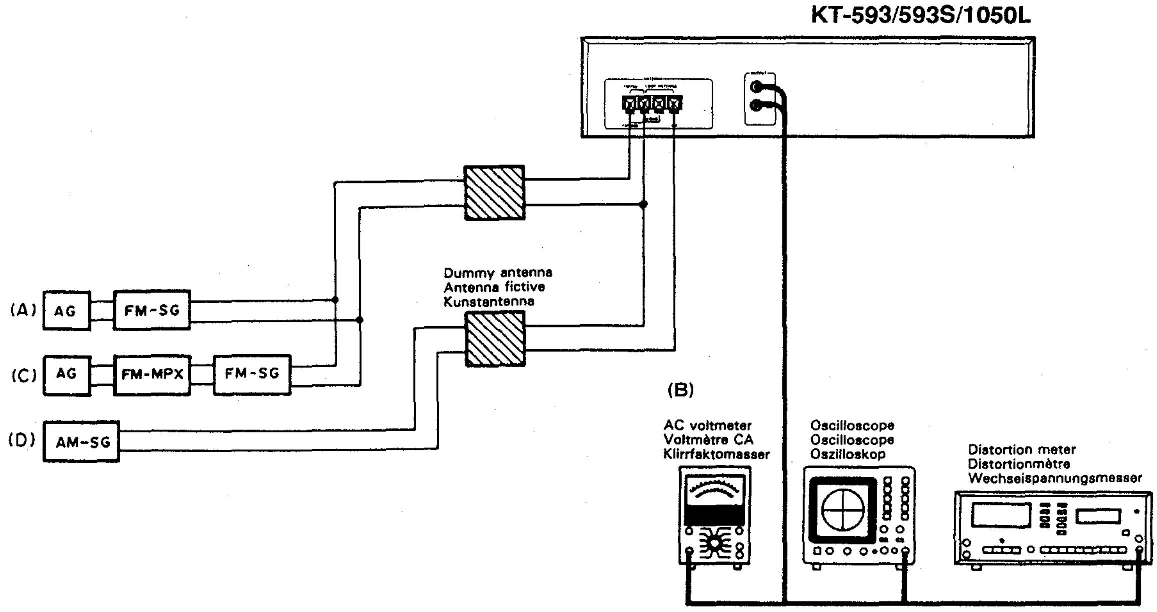
Pressing the +10 key allows to change the group. When it is pressed while the current group is group 1, the display changes to "1- ch" and the current group is changed to group 2. Pressing the key while the current group is group 2 changes it to group 3 ("2- ch" display), and pressing the key while the current group is group 3 changes it to group 1 ("0- ch" display).

(4) Method of canceling

Unplug the AC power cord.

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION SELECTOR: FM							
1	DISCRIMINATOR	(A) 98.0 MHz 1 kHz. ±75 kHz dev 60 dBμ (ANT input)	Connect a DC voltmeter between TP3 and TP4. (X05-)	AUTO or MONO 98.0 MHz	L2 (X05-)	0V	(a)
					L9 (X05-) (KT-1050L)	Minimum distortion.	
2	VCO (KT-593/1050L only)	(A) 98.0 MHz 0 dev 60 dBμ (ANT input)	Connect a frequency counter to TP5 and TP6(GND). (X05-)	AUTO 98.0 MHz	VR2 (X05-)	19.00 kHz	(b)
3	DISTORTION (STEREO)	(C) 98.0 MHz 1 kHz,±68.25 kHz dev Pilot: ±7.5 kHz dev 60 dBμ(ANT input)	(B)	AUTO 98.0 MHz	IFT (W02-)	Minimum distortion.	
4	SEPARATION (KT-593/1050L only)	(C) 98.0 MHz 1 kHz,±68.25 kHz dev Pilot: ±7.5 kHz dev Selector: L or R 60 dBμ(ANT input)	(B)	AUTO 98.0 MHz	VR4 (KT-1050L) VR5 (KT-593S) (X05-)	Minimum crosstalk.	
5	TUNING LEVEL	(A) 98.0 MHz 1 kHz,±75 kHz dev 14 dBμ(ANT input) 75Ω 18 dBμ(ANT input)300 Ω	(B)	AUTO or MONO 98.0 MHz	VR1 (X05-)	Adjust VR1 and stop at the point where FL201(two dots) goes ON.	
AM (MW) SECTION SELECTOR: AM (MW)							
(1)	TUNING LEVEL	(D) 1008 kHz 400 Hz, 30% mod 26 dBμ(ANT input)	(B)	1008 kHz	VR3 (X05-)	Adjust VR3 and stop at the point where FL201(two dots) goes ON.	


KT-593/593S/1050L
Dummy antenna
Antenne fictive
Kunstantenne
(A)
AG
FM-SG
(C)
AG
FM-MPX
FM-SG
(D)
AM-SG
(B)
AC voltmeter
Voltmètre CA
Klirrfaktomasser
Oscilloscope
Oscilloscope
Oszilloskop
Distortion meter
Distortionmètre
Wechselspannungsmesser

REGLAGE

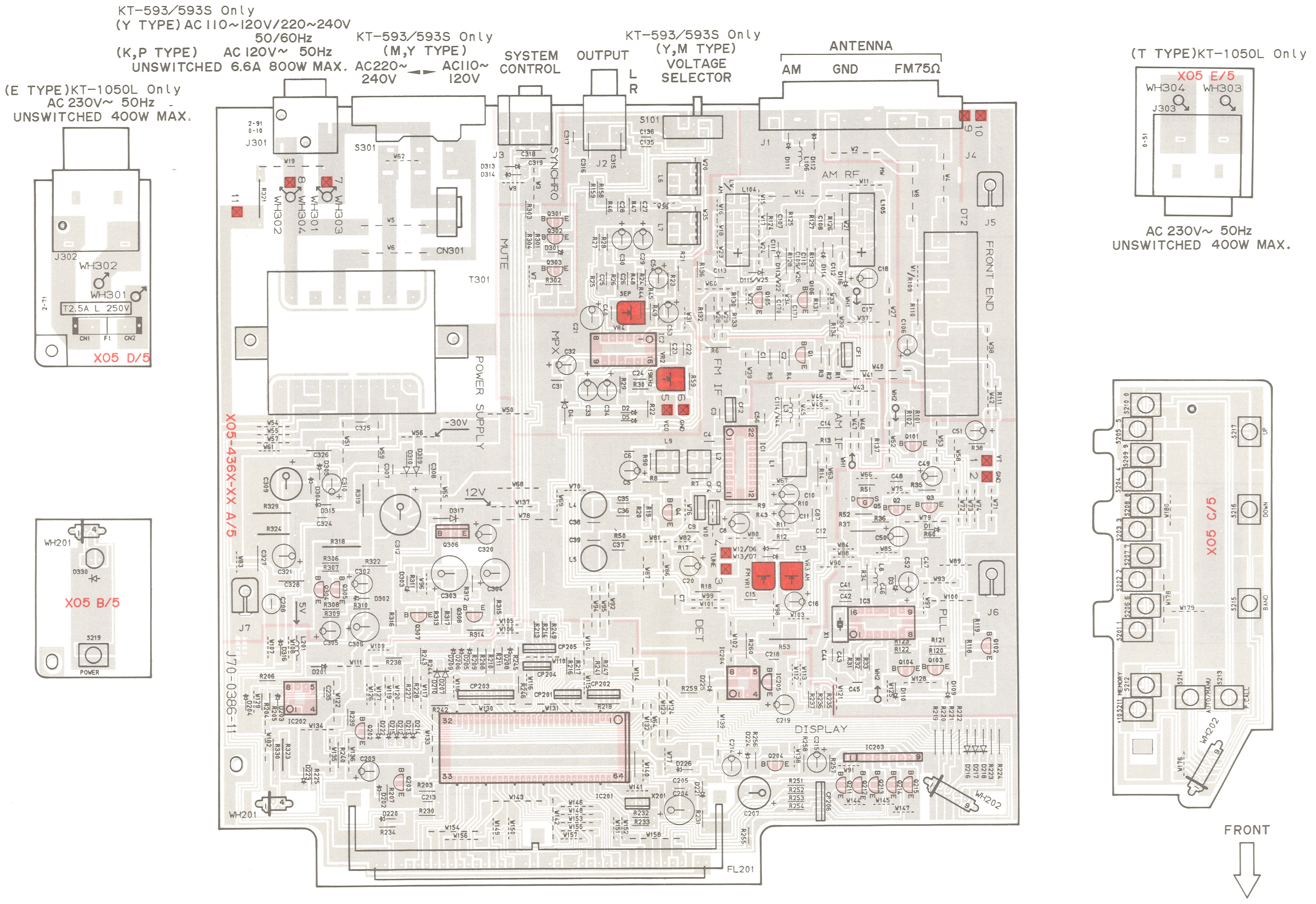
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF SELECTEUR: FM							
1	DETECTEUR	(A) 98,0 MHz 1 kHz. ±75 kHz dév 60 dBµ (Entrée ANT)	Relier un voltmètre CC entre les TP3 et TP4. (X05-)	AUTO ou MONO 98,0 MHz	L2 (X05-)	0V	(a)
					L9 (X05-) (KT-1050L)	Distorsion minimale.	
2	OSCILLATEUR CONTROLE PAR LA TENSION (KT-593/1050L seulement)	(A) 98,0 MHz 0 dév 60 dBµ (Entrée ANT)	Relier un compteur de fréquence entre les TP5 et TP6 (GND). (X05-)	AUTO 98,0 MHz	VR2 (X05-)	19,00 kHz	(b)
3	DISTORSION (STEREO)	(C) 98,0 MHz 1 kHz.±68,25 kHz dév Signal pilote: ±7,5 kHz dév 60 dBµ(Entrée ANT)	(B)	AUTO 98,0 MHz	IFT (W02-)	Distorsion minimale.	
4	SEPARATION (KT-593/1050L seulement)	(C) 98,0 MHz 1 kHz.±68,25 kHz dév Signal pilote: ±7,5 kHz dév Selection: l ou R 60 dBµ(Entrée ANT)	(B)	AUTO 98,0 MHz	VR4 (KT-1050L) VR5 (KT-593S) (X05-)	Diaphonie minimale.	
5	NIVEAU D'ACCORDER	(A) 98,0 MHz 1 kHz.±75 kHz dév 14 dBµ(Entrée ANT) 75Ω 18 dBµ(Entrée ANT)300 Ω	(B)	AUTO ou MONO 98,0 MHz	VR1 (X05-)	Ajuster VR1 et arréter le mouvement de VR1 au moment oú le FL201 (two dots) s'allume.	
SECTION MA(MW) SELECTEUR: AM (MW)							
(1)	NIVEAU D'ACCORDER	(D) 1008 kHz 400 Hz, 30% mod 26 dBµ(Entrée ANT)	(B)	1008 kHz	VR3 (X05-)	Ajuster VR3 et arréter le mouvement de VR3 au moment oú le FL201 (two dots) s'allume.	

ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FUR	ABB.
UKW-EMPFANGSABTEILUNG WÄHLER: FM							
1	DETEKTOR	(A) 98,0 MHz 1 kHz. ±75 kHz Hub 60 dBμ (ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP3 und TP4 anschließen. (X05-)	AUTO oder MONO 98,0 MHz	L2 (X05-) L9 (X05-) (KT-1050L)	0V Minimal Klirrfaktor.	(a)
2	SPANNUNGS-GEREGELTER OSZILLATOR (Nur KT-593/1050L)	(A) 98,0 MHz 0 Hub 60 dBμ (ANT-Eingang)	Einen Frequenzzähler zwischen TP5 und TP6 (GND) anschließen. (X05-)	AUTO 98,0 MHz	VR2 (X05-)	19,00 kHz	(b)
3	KLIRRFAKTOR (STEREO)	(C) 98,0 MHz 1 kHz.±68,25 kHz Hub Pilotten: ±7,5 kHz Hub 60 dBμ(ANT-Eingang)	(B)	AUTO 98,0 MHz	IFT (W02-)	Minimal Klirrfaktor.	
4	STEREO KANAL TRENNUNG (Nur KT-593/1050L)	(C) 98,0 MHz 1 kHz.±68,25 kHz Hub Pilotten: ±7,5 kHz Hub Wähler: L oder R 60 dBμ(ANT-Eingang)	(B)	AUTO 98,0 MHz	VR4 (KT-1050L) VR5 (KT-593S) (X05-)	Minimal Klirrfaktor.	
5	ABSTIMM PEGEL	(A) 98,0 MHz 1 kHz.±75 kHz Hub 14 dBμ(ANT-Eingang) 75Ω 18 dBμ(ANT-Eingang)300 Ω	(B)	AUTO oder MONO 98,0 MHz	VR1 (X05-)	Den Pegel wiederstand aufdrehen, und dem VR1 Halt geben wobei den FL201 (two dots) anzeiger leuchtet wird.	
MW-EMPFANGSABTEILUNG WÄHLER: AM (MW)							
(1)	ABSTIMM PEGEL	(D) 1008 kHz 400 Hz, 30% mod 26 dBμ(ANT-Eingang)	(B)	1008 kHz	VR3 (X05-)	Den Pegel wiederstand aufdrehen, und dem VR3 Halt geben wobei den FL201 (two dots) anzeiger leuchtet wird.	

PC BOARD (KT-593/593S/1050L:Component side view)

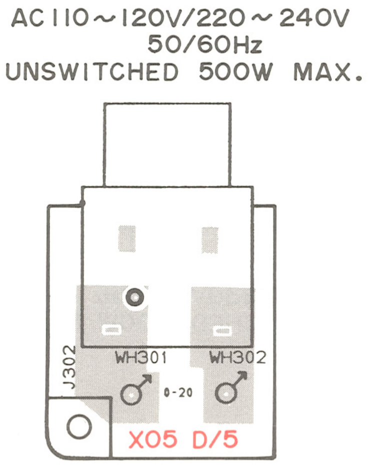
TUNER UNIT

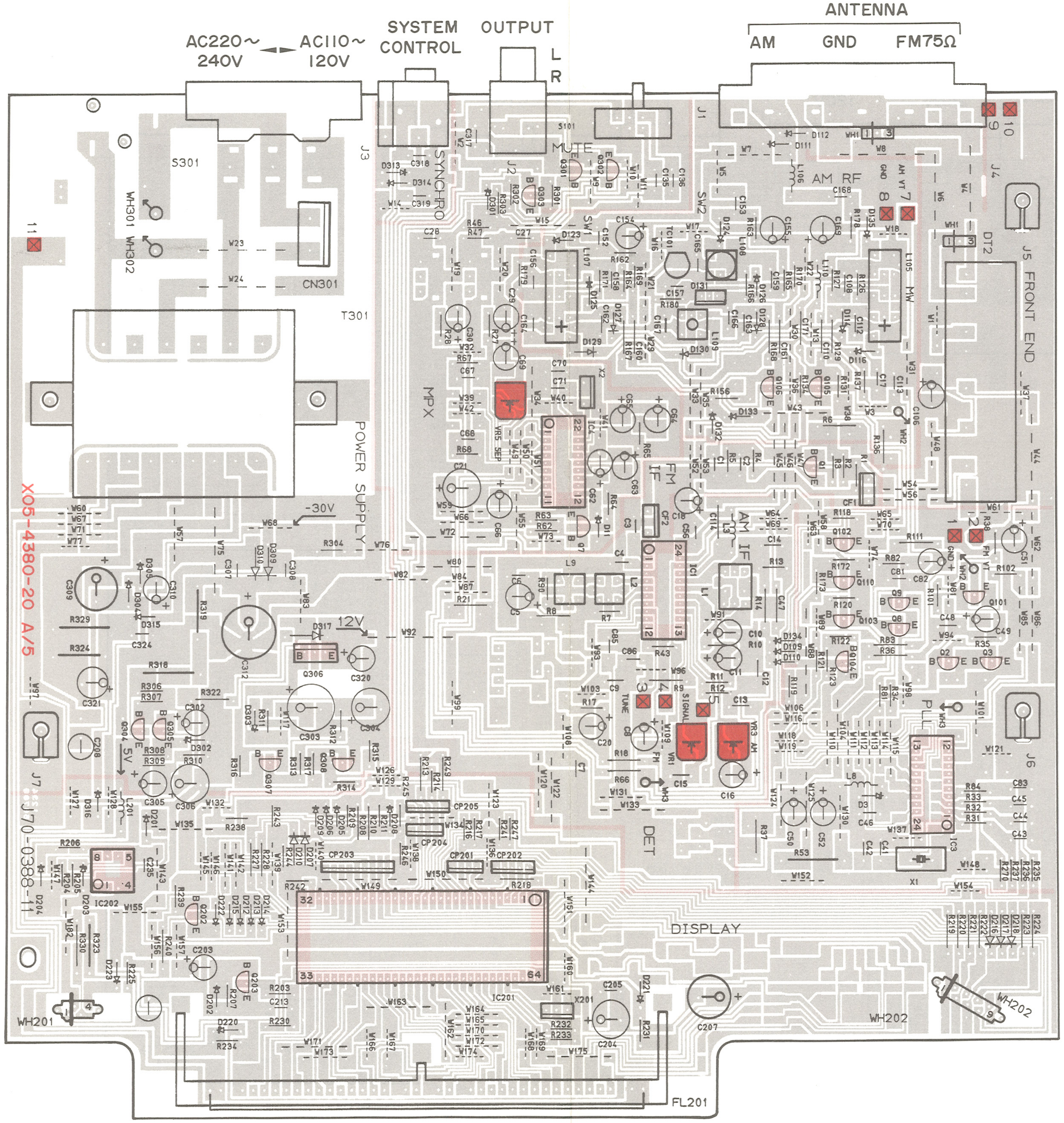

KT-593/593S Only
(Y TYPE) AC 110~120V/220~240V
50/60Hz
(K,P TYPE) AC 120V~ 50Hz
UNSWITCHED 6.6A 800W MAX.
KT-593/593S Only
(M,Y TYPE)
AC220~240V ◄► AC110~120V
SYSTEM CONTROL
OUTPUT
L
R
KT-593/593S Only
(Y,M TYPE)
VOLTAGE SELECTOR
ANTENNA
AM
GND
FM75Ω
(E TYPE)KT-1050L Only
AC 230V~ 50Hz
UNSWITCHED 400W MAX.
J302
WH302
WH301
T2.5A L 250V
X05 D/5
(T TYPE)KT-1050L Only
X05 E/5
WH304
WH303
J303
AC 230V~ 50Hz
UNSWITCHED 400W MAX.
J301
S301
WH302
WH304
WH301
WH303
CN301
T301
J3
SYNCHRO
MUTE
J2
S101
J1
J4
AM RF
DT2
J5
FRONT END
MPX
FM IF
AM IF
POWER SUPPLY
-30V
12V
5V
X05-436X-XX A/5
J70-0386-11
J7
DET
PLL
J6
DISPLAY
IC203
IC202
IC201
FL201
WH201
X05 B/5
S219
POWER
X05 C/5
MEMORY
AUTO/MANU
P.CALL
WH202
FRONT

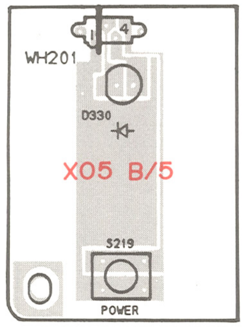
Refer to the schematic diagram for the values of resistors and capacitors.

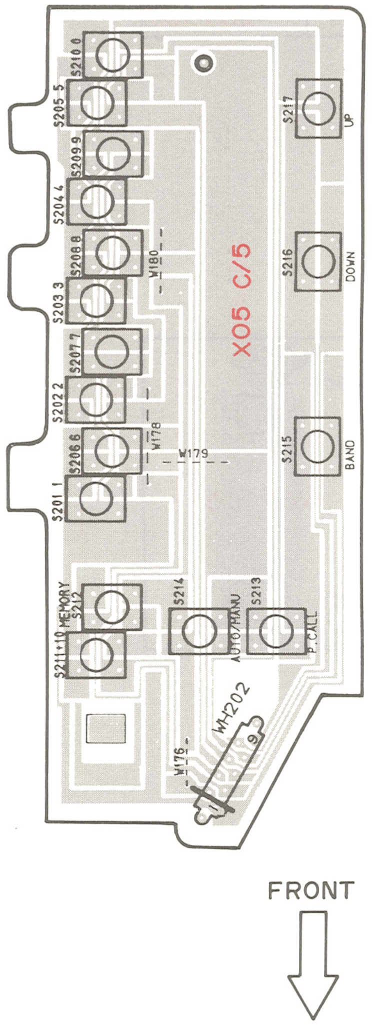
PC BOARD (KT-593S:Component side view) M type only

TUNER UNIT

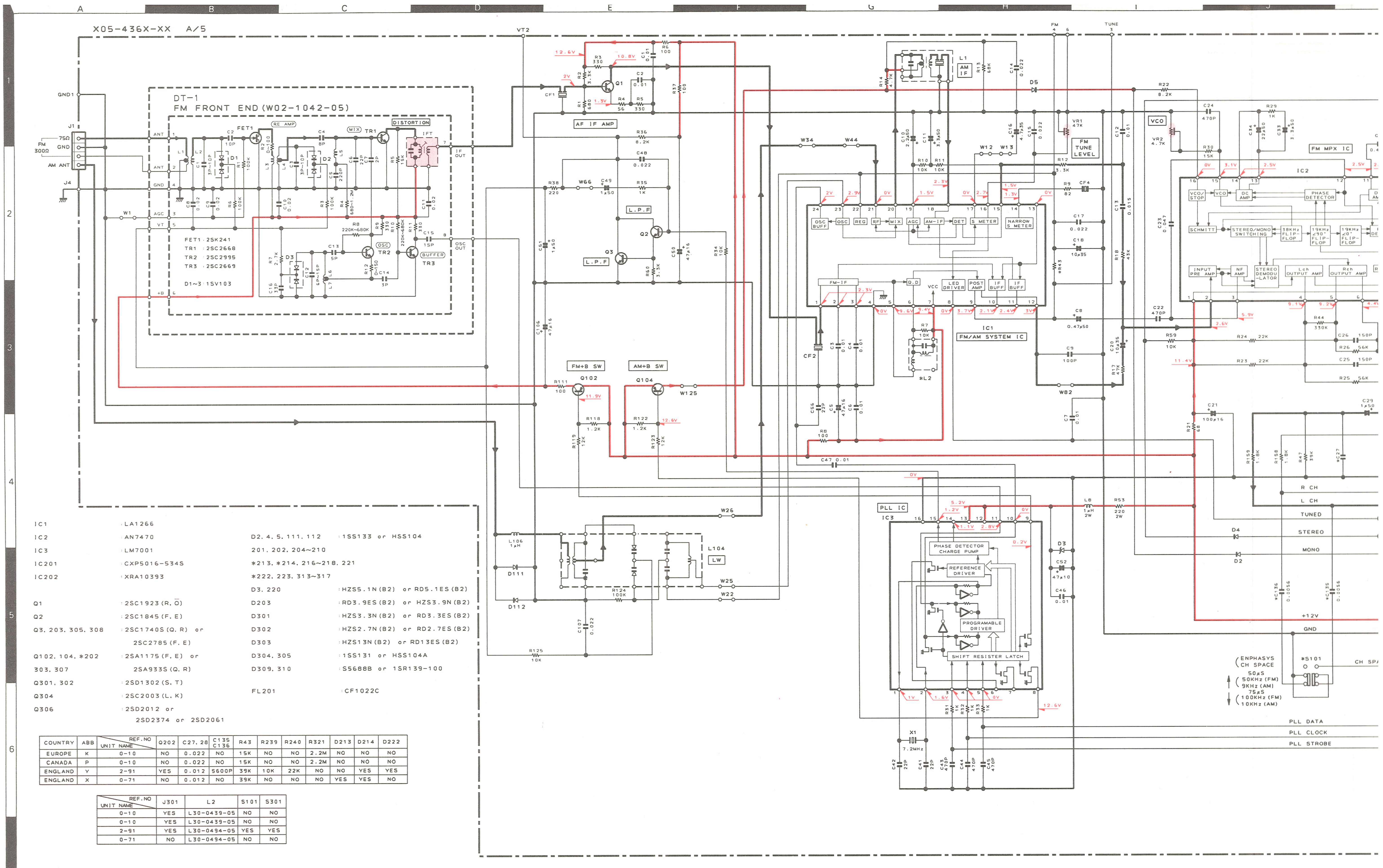

AC110~120V/220~240V
50/60Hz
UNSWITCHED 500W MAX.
J302
WH301
WH302
X05 D/5


AC220~ 240V
AC110~ 120V
SYSTEM CONTROL
OUTPUT
L
R
ANTENNA
AM
GND
FM75Ω
S301
WH301
WH302
CN301
T301
J3
J2
J1
J4
J5 FRONT END
J6
J7
SYNCHRO
MUTE
MPX
POWER SUPPLY
-30V
12V
5V
FM IF
AM IF
AM RF
MW
DET
TUNE
SIGNAL
PLL
DISPLAY
IC201
IC202
FL201
WH201
WH202
X05-4380-20 A/5
J70-0388-11


WH201
D330
X05 B/5
S219
POWER


S210 0
S205 5
S209 9
S204 4
S208 8
S203 3
S207 7
S202 2
S206 6
S201 1
S211+10 MEMORY
S212
S214
S213
S217 UP
S216 DOWN
S215 BAND
AUTO/MANU
X05 C/5
WH202
FRONT

Refer to the schematic diagram for the values of resistors and capacitors.

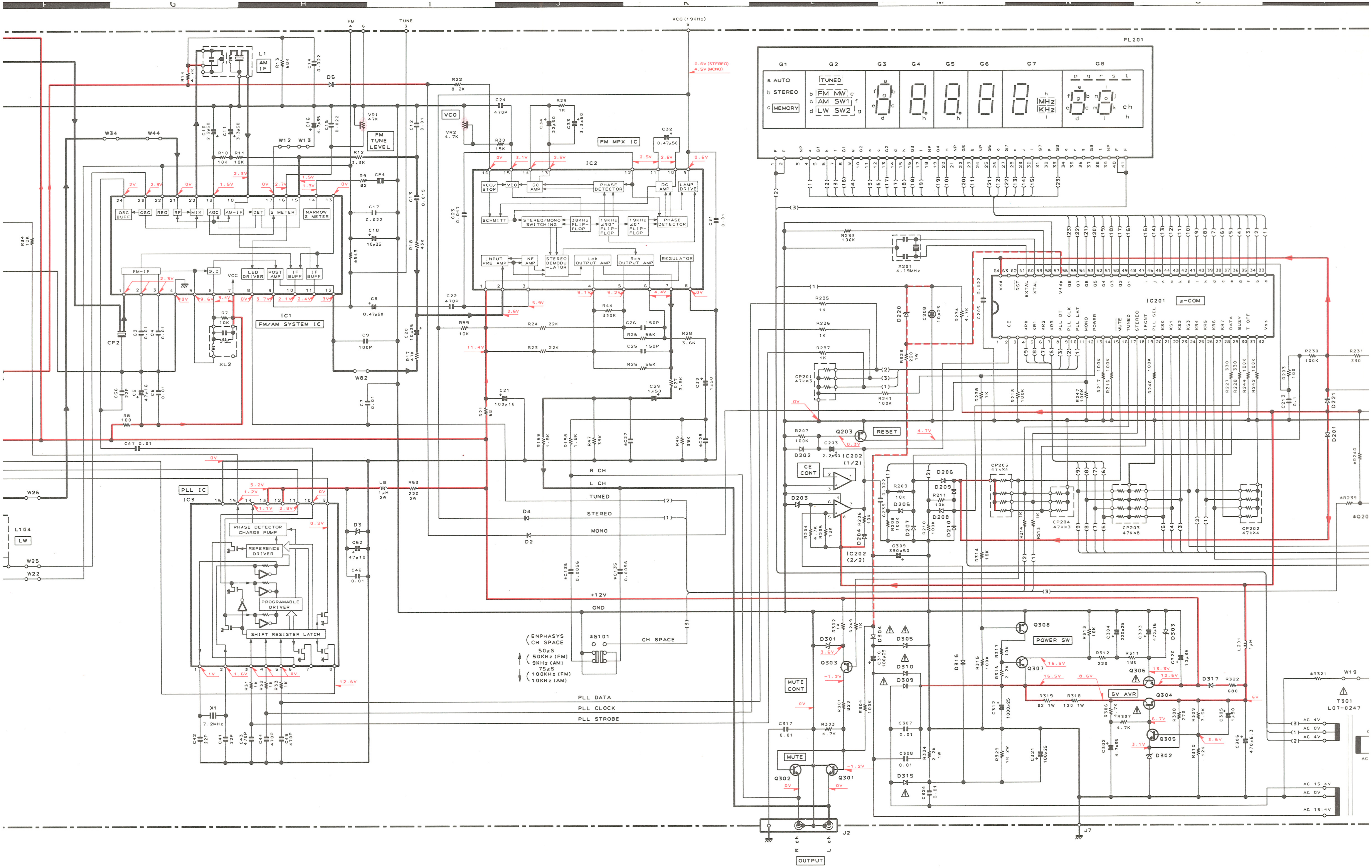


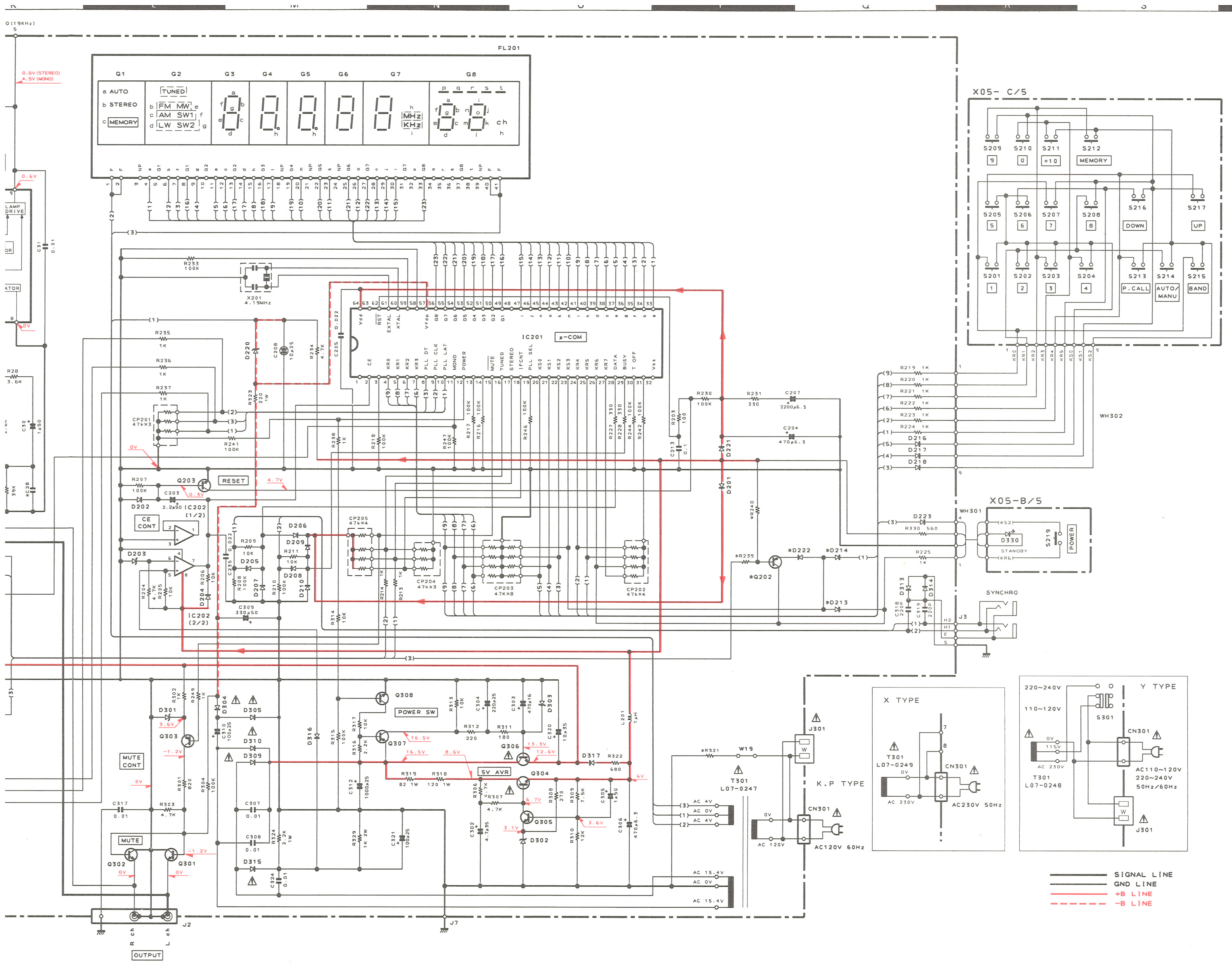
A
B
C
D
E
F
G
H
I
J
1
2
3
4
5
6
7
X05-436X-XX A/5
DT-1
FM FRONT END (W02-1042-05)
GND1
J1
75Ω
FM 300Ω
GND
AM ANT
J4
ANT
AGC
VT
+B
FET1
RF AMP
MIX
TR1
DISTORTION
IFT
IF OUT
OSC
TR2
BUFFER
TR3
OSC OUT
FET1 : 2SK241
TR1 : 2SC2668
TR2 : 2SC2995
TR3 : 2SC2669
D1~3 : 1SV103
VT2
AF IF AMP
Q1
Q2
Q3
L.P.F
FM+B SW
AM+B SW
Q102
Q104
W125
W66
W34
W44
W12
W13
W26
W25
W22
W82
W1
L1
AM IF
D5
VR1 47K
FM TUNE LEVEL
IC1
FM/AM SYSTEM IC
OSC BUFF
OSC
REG
RF
MIX
AGC
AM-IF
DET
S METER
NARROW S METER
FM-IF
Q.D
LED DRIVER
POST AMP
IF BUFF
VCC
CF2
*L2
VCO
VR2 4.7K
FM MPX IC
IC2
VCO/STOP
DC AMP
PHASE DETECTOR
SCHMITT
STEREO/MONO SWITCHING
38KHz FLIP-FLOP
19KHz ∠90° FLIP-FLOP
19KHz ∠0° FLIP-FLOP
INPUT PRE AMP
NF AMP
STEREO DEMODU-LATOR
Lch OUTPUT AMP
Rch OUTPUT AMP
PLL IC
IC3
PHASE DETECTOR CHARGE PUMP
REFERENCE DRIVER
PROGRAMABLE DRIVER
SHIFT RESISTER LATCH
X1
7.2MHz
L104
LW
L106 1μH
D111
D112
L8 1μH 2W
R53 220 2W
D3
D4
D2
R CH
L CH
TUNED
STEREO
MONO
+12V
GND
ENPHASYS CH SPACE
50μS 50KHz (FM) 9KHz (AM)
75μS 100KHz (FM) 10KHz (AM)
*S101
CH SPA
PLL DATA
PLL CLOCK
PLL STROBE
FM
TUNE
12.6V
10.8V
2V
1.3V
11.9V
12.6V

IC1	:LA1266		
IC2	:AN7470	D2, 4, 5, 111, 112	:1SS133 or HSS104
IC3	:LM7001	201, 202, 204~210	
IC201	:CXP5016-534S	*213, *214, 216~218, 221	
IC202	:XRA10393	*222, 223, 313~317	
		D3, 220	:HZS5.1N (B2) or RD5.1ES (B2)
Q1	:2SC1923 (R, O)	D203	:RD3.9ES (B2) or HZS3.9N (B2)
Q2	:2SC1845 (F, E)	D301	:HZS3.3N (B2) or RD3.3ES (B2)
Q3, 203, 305, 308	:2SC1740S (Q, R) or 2SC2785 (F, E)	D302	:HZS2.7N (B2) or RD2.7ES (B2)
		D303	:HZS13N (B2) or RD13ES (B2)
Q102, 104, *202 303, 307	:2SA1175 (F, E) or 2SA933S (Q, R)	D304, 305	:1SS131 or HSS104A
		D309, 310	:S5688B or 1SR139-100
Q301, 302	:2SD1302 (S, T)		
Q304	:2SC2003 (L, K)	FL201	:CF1022C
Q306	:2SD2012 or 2SD2374 or 2SD2061		

COUNTRY	ABB	REF.NO UNIT NAME	Q202	C27, 28	C135 C136	R43	R239	R240	R321	D213	D214	D222
EUROPE	K	0-10	NO	0.022	NO	15K	NO	NO	2.2M	NO	NO	NO
CANADA	P	0-10	NO	0.022	NO	15K	NO	NO	2.2M	NO	NO	NO
ENGLAND	Y	2-91	YES	0.012	5600P	39K	10K	22K	NO	NO	YES	YES
ENGLAND	X	0-71	NO	0.012	NO	39K	NO	NO	NO	YES	YES	NO

REF.NO UNIT NAME	J301	L2	S101	S301
0-10	YES	L30-0439-05	NO	NO
0-10	YES	L30-0439-05	NO	NO
2-91	YES	L30-0494-05	YES	YES
0-71	NO	L30-0494-05	NO	NO


FM
TUNE
VCO (19KHz)
FL201
G1
G2
G3
G4
G5
G6
G7
G8
a AUTO
b STEREO
c MEMORY
TUNED
FM MW
AM SW1
LW SW2
MHz
KHz
L1
AM IF
D5
R22 8.2K
VR1 47K
FM TUNE LEVEL
VCO
VR2 4.7K
R30 15K
C24 470P
R29 1K
C32 0.47µ50
FM MPX IC
IC2
0.6V (STEREO)
4.5V (MONO)
W34
W44
W12
W13
R10 10K
R11 10K
R12 3.3K
R9 82
CF4
C17 0.022
C18 10µ35
OSC BUFF
OSC
REG
RF
MIX
AGC
AM-IF
DET
S METER
NARROW S METER
FM-IF
Q.D
VCC
LED DRIVER
POST AMP
IF BUFF
IF BUFF
IC1
FM/AM SYSTEM IC
C8 0.47µ50
C22 470P
CF2
R7 10K
*L2
C9 100P
W82
R8 100
C47 0.01
VCO/STOP
VCO
DC AMP
PHASE DETECTOR
DC AMP
LAMP DRIVE
SCHMITT
STEREO/MONO SWITCHING
38KHz FLIP-FLOP
19KHz ∠90° FLIP-FLOP
19KHz ∠0° FLIP-FLOP
PHASE DETECTOR
INPUT PRE AMP
NF AMP
STEREO DEMODU-LATOR
Lch OUTPUT AMP
Rch OUTPUT AMP
REGULATOR
R44 330K
R59 10K
R24 22K
R23 22K
C26 150P
R26 56K
C25 150P
R25 56K
R28 3.6K
R27 3.6K
C21 100µ16
C29 1µ50
R CH
L CH
TUNED
STEREO
MONO
D4
D2
D3
C52 47µ10
C46 0.01
W26
L104
LW
W25
W22
PLL IC
IC3
PHASE DETECTOR CHARGE PUMP
REFERENCE DRIVER
PROGRAMABLE DRIVER
SHIFT RESISTER LATCH
L8 1µH 2W
R53 220 2W
X1 7.2MHz
C42 22P
C41 22P
C43 470P
C44 470P
C45 470P
+12V
GND
ENPHASYS CH SPACE
50µS 50KHz (FM) 9KHz (AM)
75µS 100KHz (FM) 10KHz (AM)
*S101
CH SPACE
PLL DATA
PLL CLOCK
PLL STROBE
IC201
µ-COM
X201 4.19MHz
R233 100K
R235 1K
R236 1K
R237 1K
CP201 47K×3
R241 100K
D220
C208 10µ25
R207 100K
Q203
RESET
D202
C203 2.2µ50
IC202 (1/2)
CE CONT
D203
IC202 (2/2)
D204
D206
D209
D205
D208
D207
D210
C309 330µ50
CP205 47K×4
CP204 47K×3
CP203 47K×8
CP202 47K×4
R230 100K
R231 330
D221
D201
*R240
*R239
*Q20
Q308
POWER SW
Q307
Q306
Q304
5V AVR
Q305
D302
D303
D317
R322 680
L201 1µH
W19
*R321
T301 L07-0247
AC 4V
AC 0V
AC 4V
AC 15.4V
AC 0V
AC 15.4V
D301
Q303
D304
D305
D310
D309
D315
D316
MUTE CONT
MUTE
Q302
Q301
J2
R ch
L ch
OUTPUT
J7


FL201
G1 G2 G3 G4 G5 G6 G7 G8
AUTO
STEREO
MEMORY
TUNED
FM MW
AM SW1
LW SW2
MHz
KHz
ch
X201 4.19MHz
IC201 μ-COM
RESET
CE CONT
IC202 (1/2)
IC202 (2/2)
MUTE CONT
MUTE
POWER SW
5V AVR
OUTPUT
R ch
L ch
J2
J7
X05- C/5
S209 9
S210 0
S211 +10
S212 MEMORY
S205 5
S206 6
S207 7
S208 8
S216 DOWN
S217 UP
S201 1
S202 2
S203 3
S204 4
S213 P.CALL
S214 AUTO/MANU
S215 BAND
WH302
X05-B/5
WH301
D330
STANDBY
S219
POWER
SYNCHRO
J3
X TYPE
T301 L07-0249
CN301
AC 230V
AC230V 50Hz
Y TYPE
220~240V
110~120V
S301
T301 L07-0248
AC110~120V
220~240V
50Hz/60Hz
J301
K.P TYPE
T301 L07-0247
AC 120V
AC120V 60Hz
W19
0.6V (STEREO)
4.5V (MONO)
LAMP DRIVE
SIGNAL LINE
GND LINE
+B LINE
-B LINE

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a singal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

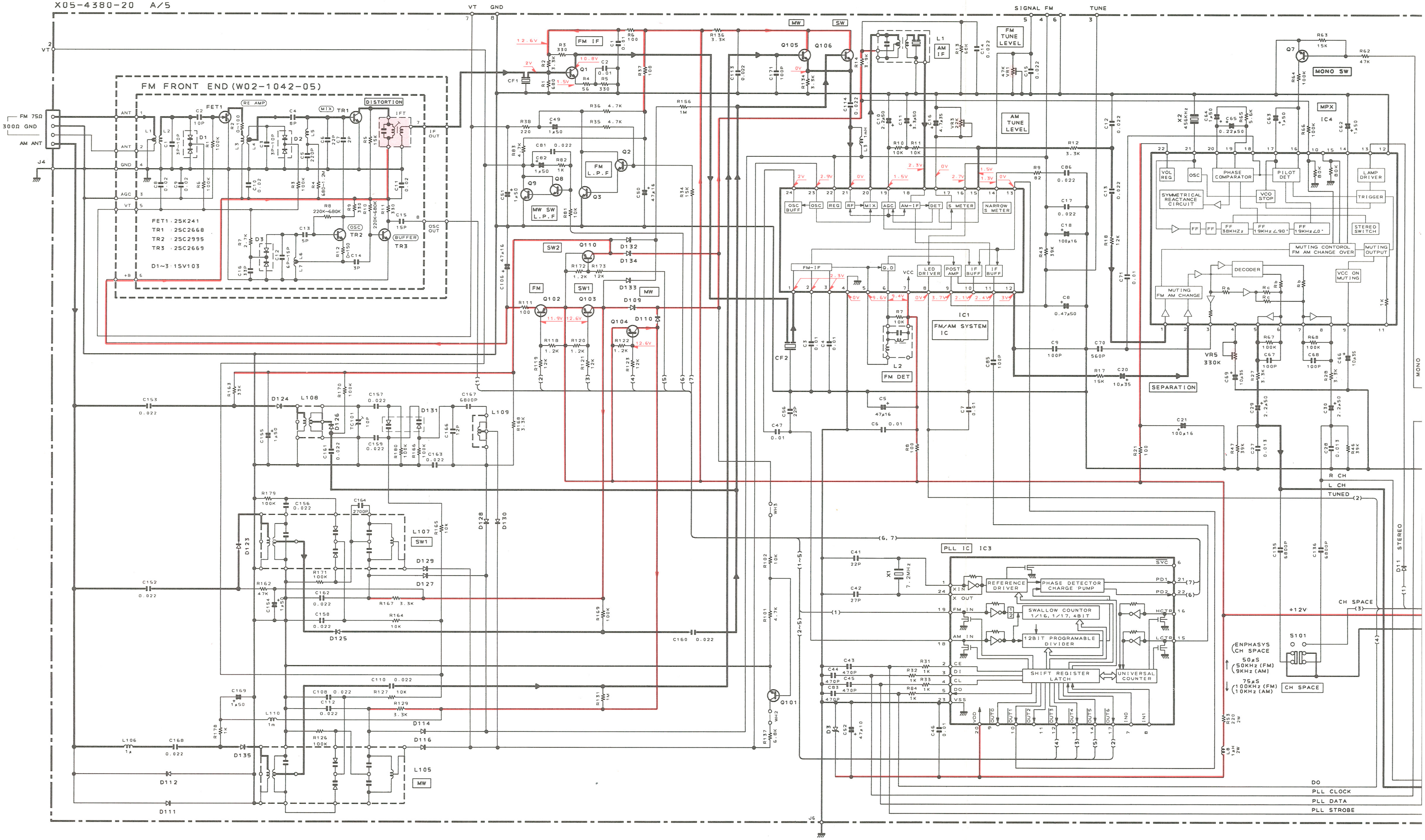
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y07-3570-10

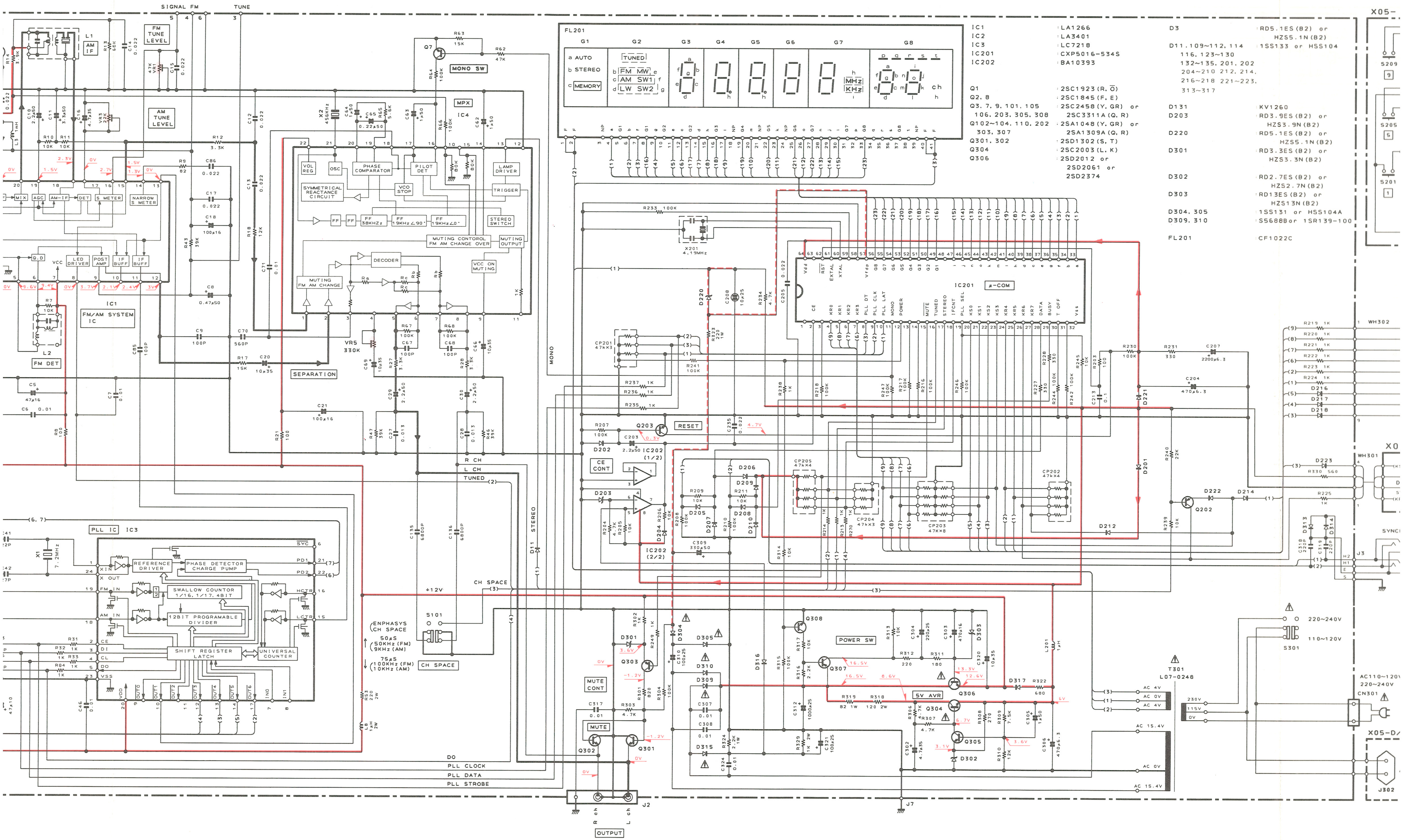
KT-593

KENWOOD

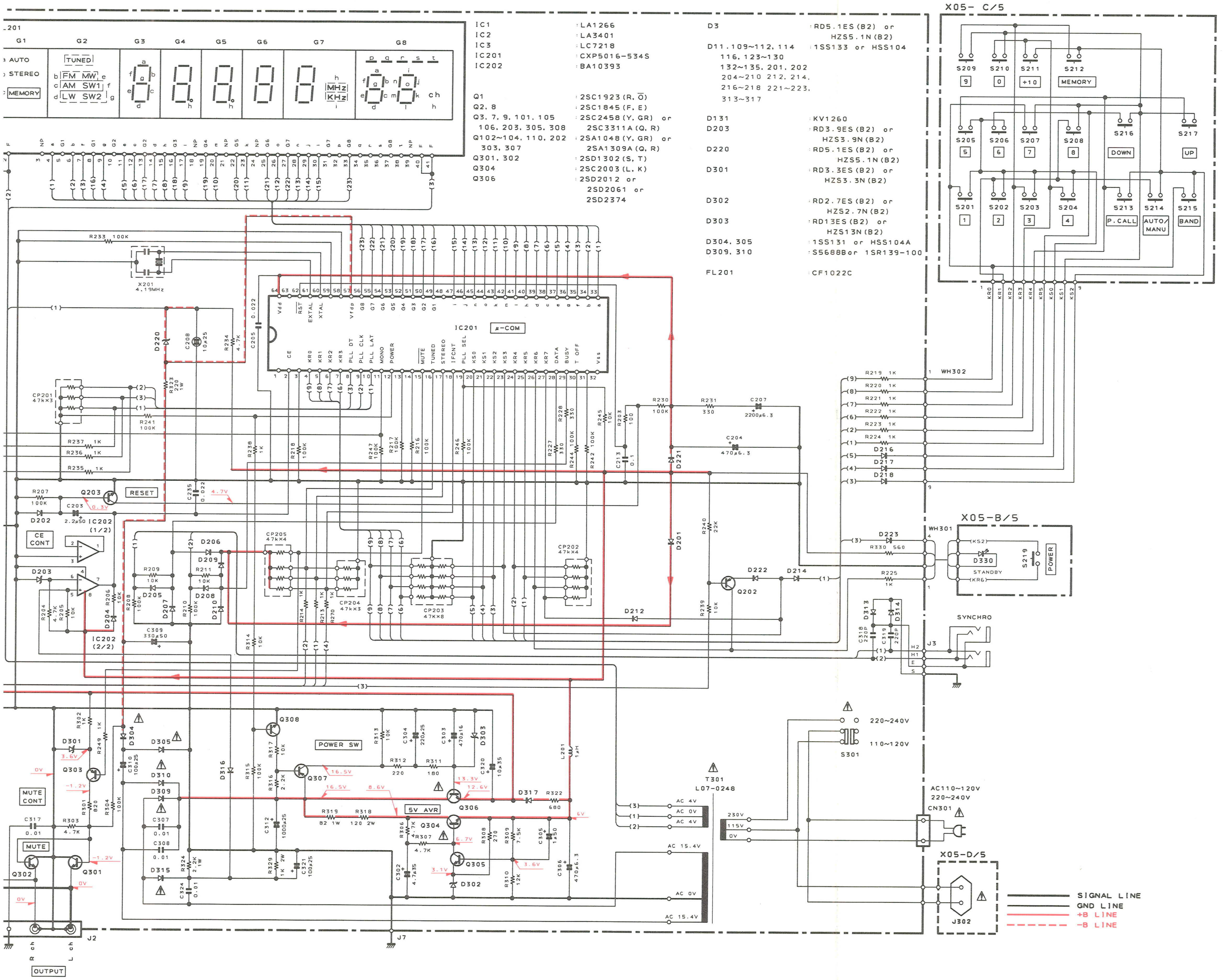
X05-4380-20 A/5



VT
GND
SIGNAL FM
TUNE
FM FRONT END (W02-1042-05)
FM 75Ω
300Ω GND
AM ANT
J4
ANT
GND
AGC
VT
FET1
RF AMP
MIX
TR1
DISTORTION
IFT
IF OUT
OSC
TR2
BUFFER
TR3
OSC OUT
FET1 : 2SK241
TR1 : 2SC2668
TR2 : 2SC2995
TR3 : 2SC2669
D1~3 : 1SV103
FM IF
Q1
CF1
12.6V
10.8V
Q105
Q106
MW
SW
L1
AM IF
FM TUNE LEVEL
AM TUNE LEVEL
FM L.P.F
MW SW L.P.F
Q2
Q3
Q8
Q9
SW2
Q110
D132
D134
FM
SW1
Q102
Q103
D133
D109
Q104
D110
OSC BUFF
OSC
REG
RF
MIX
AGC
AM-IF
DET
S METER
NARROW S METER
FM-IF
Q.D
VCC
LED DRIVER
POST AMP
IF BUFF
IC1
FM/AM SYSTEM IC
FM DET
CF2
L2
X2 456KHz
IC4
MPX
Q7
MONO SW
VOL REG
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
SYMMETRICAL REACTANCE CIRCUIT
VCO STOP
TRIGGER
FF
FF 38KHZ
FF 19KHz∠90°
FF 19KHz∠0°
STEREO SWITCH
MUTING CONTOROL FM AM CHANGE OVER
MUTING OUTPUT
DECODER
VCC ON MUTING
MUTING FM AM CHANGE
VR5 330K
SEPARATION
R CH
L CH
TUNED
STEREO
MONO
D124
L108
D126
D131
L109
L107
SW1
D123
D129
D127
D125
D128
D130
L110
L106
D135
D114
D116
D112
D111
L105
MW
Q101
PLL IC
IC3
X1 7.2MHz
XIN
X OUT
FM IN
AM IN
REFERENCE DRIVER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTOR 1/16, 1/17, 4BIT
12BIT PROGRAMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
SYC
PD1
PD2
HCTR
LCTR
CE
DI
CL
DO
VSS
VDD
OUT0
OUT1
OUT2
OUT3
OUT4
OUT5
IN0
IN1
+12V
CH SPACE
S101
ENPHASYS CH SPACE
50μS (50KHz (FM) 9KHz (AM))
75μS (100KHz (FM) 10KHz (AM))
DO
PLL CLOCK
PLL DATA
PLL STROBE
J6


SIGNAL FM
TUNE
FM TUNE LEVEL
AM TUNE LEVEL
AM IF
L1
L2
L3 1mH
FM DET
MIX
AGC
AM-IF
DET
S METER
NARROW S METER
LED DRIVER
POST AMP
IF BUFF
Q.D
VCC
IC1
FM/AM SYSTEM IC
MONO SW
MPX
IC4
VOL REG
OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
SYMMETRICAL REACTANCE CIRCUIT
VCO STOP
TRIGGER
FF
FF 38KHZ
FF 19KHz∠90°
FF 19KHz∠0°
STEREO SWITCH
MUTING CONTOROL FM AM CHANGE OVER
MUTING OUTPUT
DECODER
VCC ON MUTING
MUTING FM AM CHANGE
X2 456kHz
VR5 330K
SEPARATION
R CH
L CH
TUNED
MONO
STEREO
PLL IC
IC3
X1 7.2MHz
REFERENCE DRIVER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTOR 1/16, 1/17, 4BIT
12BIT PROGRAMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
SYC
PD1
PD2
HCTR
LCTR
XIN
X OUT
FM IN
AM IN
CE
DI
CL
DO
VSS
VDD
+12V
CH SPACE
ENPHASYS CH SPACE
50μS 50KHz (FM) 9KHz (AM)
75μS 100KHz (FM) 10KHz (AM)
S101
DO
PLL CLOCK
PLL DATA
PLL STROBE
FL201
G1
G2
G3
G4
G5
G6
G7
G8
a AUTO
b STEREO
c MEMORY
TUNED
FM
MW
AM
SW1
LW
SW2
MHz
KHz
ch
X201 4.19MHz
IC201
μ-COM
Vdd
RST
EXTAL
XTAL
Vfdp
CE
KR0
KR1
KR2
KR3
PLL DT
PLL CLK
PLL LAT
MONO
POWER
MUTE
TUNED
STEREO
IFCNT
PLL SEL
KS0
KS1
KS2
KS3
KR4
KR5
KR6
KR7
DATA
BUSY
T OFF
Vss
CP201 47K×3
CP202 47K×4
CP203 47K×8
CP204 47K×3
CP205 47K×4
RESET
Q203
CE CONT
IC202 (1/2)
IC202 (2/2)
D202
D203
D220
D221
D201
D212
Q202
WH302
WH301
J3
SYNC
POWER SW
5V AVR
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
MUTE CONT
MUTE
T301 L07-0248
S301
220~240V
110~120V
AC110~120V 220~240V
CN301
230V
115V
0V
AC 4V
AC 0V
AC 15.4V
J2
J7
J302
OUTPUT
R ch
L ch
X05-

IC1	:LA1266	D3	:RD5.1ES(B2) or HZS5.1N(B2)
IC2	:LA3401	D11.109~112, 114 116, 123~130 132~135, 201, 202 204~210 212, 214, 216~218 221~223, 313~317	:1SS133 or HSS104
IC3	:LC7218	D131	:KV1260
IC201	:CXP5016-534S	D203	:RD3.9ES(B2) or HZS3.9N(B2)
IC202	:BA10393	D220	:RD5.1ES(B2) or HZS5.1N(B2)
Q1	:2SC1923(R, $\overline{O}$)	D301	:RD3.3ES(B2) or HZS3.3N(B2)
Q2, 8	:2SC1845(F, E)	D302	:RD2.7ES(B2) or HZS2.7N(B2)
Q3, 7, 9, 101, 105 106, 203, 305, 308	:2SC2458(Y, GR) or 2SC3311A(Q, R)	D303	:RD13ES(B2) or HZS13N(B2)
Q102~104, 110, 202 303, 307	:2SA1048(Y, GR) or 2SA1309A(Q, R)	D304, 305	:1SS131 or HSS104A
Q301, 302	:2SD1302(S, T)	D309, 310	:S5688B or 1SR139-100
Q304	:2SC2003(L, K)	FL201	:CF1022C
Q306	:2SD2012 or 2SD2061 or 2SD2374		


IC1 : LA1266
IC2 : LA3401
IC3 : LC7218
IC201 : CXP5016-534S
IC202 : BA10393
Q1 : 2SC1923(R, O)
Q2, 8 : 2SC1845(F, E)
Q3, 7, 9, 101, 105, 106, 203, 305, 308 : 2SC2458(Y, GR) or 2SC3311A(Q, R)
Q102~104, 110, 202, 303, 307 : 2SA1048(Y, GR) or 2SA1309A(Q, R)
Q301, 302 : 2SD1302(S, T)
Q304 : 2SC2003(L, K)
Q306 : 2SD2012 or 2SD2061 or 2SD2374
D3 : RD5.1ES(B2) or HZS5.1N(B2)
D11, 109~112, 114, 116, 123~130, 132~135, 201, 202, 204~210, 212, 214, 216~218, 221~223, 313~317 : 1SS133 or HSS104
D131 : KV1260
D203 : RD3.9ES(B2) or HZS3.9N(B2)
D220 : RD5.1ES(B2) or HZS5.1N(B2)
D301 : RD3.3ES(B2) or HZS3.3N(B2)
D302 : RD2.7ES(B2) or HZS2.7N(B2)
D303 : RD13ES(B2) or HZS13N(B2)
D304, 305 : 1SS131 or HSS104A
D309, 310 : S5688B or 1SR139-100
FL201 : CF1022C
X05- C/5
X05-B/5
X05-D/5
FL201
G1 G2 G3 G4 G5 G6 G7 G8
AUTO
STEREO
MEMORY
TUNED
FM MW
AM SW1
LW SW2
MHz
KHz
ch
IC201
μ-COM
X201 4.19MHz
RESET
CE CONT
IC202 (1/2)
IC202 (2/2)
MUTE CONT
MUTE
Q301
Q302
Q303
Q202
Q203
Q304
Q305
Q306
Q307
Q308
POWER SW
5V AVR
T301 L07-0248
S301
220~240V
110~120V
AC110~120V
220~240V
CN301
230V
115V
0V
AC 4V
AC 0V
AC 15.4V
J2
J3
J7
J302
OUTPUT
R ch
L ch
SYNCHRO
WH301
WH302
STANDBY
POWER
S209 9
S210 0
S211 +10
S212 MEMORY
S205 5
S206 6
S207 7
S208 8
S216 DOWN
S217 UP
S201 1
S202 2
S203 3
S204 4
S213 P.CALL
S214 AUTO/MANU
S215 BAND
S219
D330
SIGNAL LINE
GND LINE
+B LINE
-B LINE

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a singal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

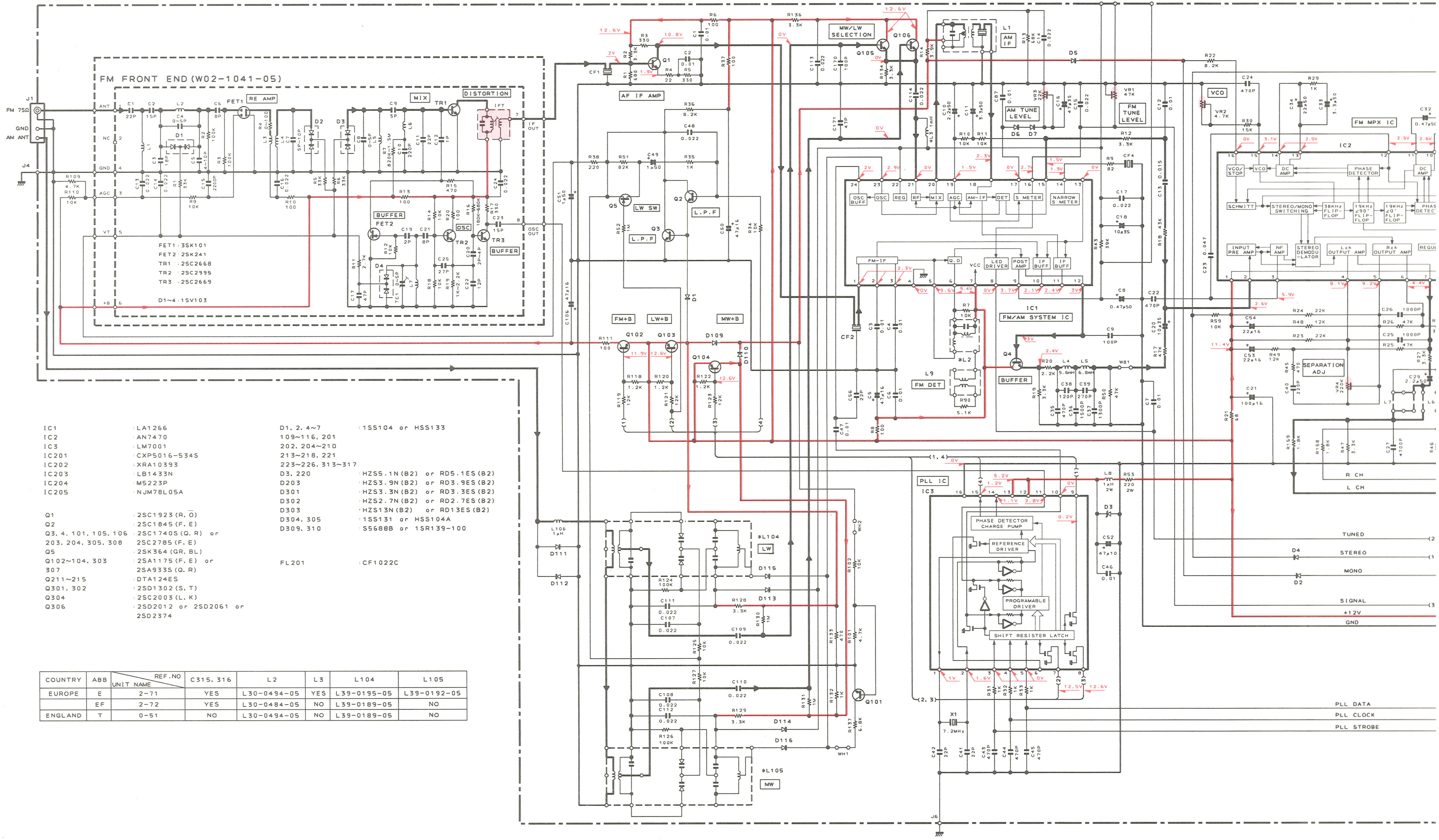
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

Y07-3570-10

KT-593S

KENWOOD

X05-436X-XX A/5


FM FRONT END (W02-1041-05)
FM 75Ω
GND
AM ANT
J1
J4
ANT
NC
GND
AGC
VT
+B
RF AMP
MIX
DISTORTION
IFT
IF OUT
OSC OUT
BUFFER
OSC
FET1
FET2
TR1
TR2
TR3
FET1 : 3SK101
FET2 : 2SK241
TR1 : 2SC2668
TR2 : 2SC2995
TR3 : 2SC2669
D1~4 : 1SV103
AF IF AMP
MW/LW SELECTION
LW SW
L.P.F
AM IF
AM TUNE LEVEL
FM TUNE LEVEL
VR1 47K
VR2 4.7K
VR3
VCO
FM MPX IC
IC2
VCO/STOP
VCO
DC AMP
PHASE DETECTOR
SCHMITT
STEREO/MONO SWITCHING
38KHz FLIP-FLOP
19KHz ∠90° FLIP-FLOP
19KHz ∠0° FLIP-FLOP
INPUT PRE AMP
NF AMP
STEREO DEMODULATOR
Lch OUTPUT AMP
Rch OUTPUT AMP
SEPARATION ADJ
OSC BUFF
OSC
REG
RF
MIX
AGC
AM-IF
DET
S METER
NARROW S METER
FM-IF
Q.D
VCC
LED DRIVER
POST AMP
IF BUFF
IC1
FM/AM SYSTEM IC
BUFFER
FM DET
FM+B
LW+B
MW+B
LW
MW
*L104
*L105
PLL IC
IC3
PHASE DETECTOR CHARGE PUMP
REFERENCE DRIVER
PROGRAMABLE DRIVER
SHIFT RESISTER LATCH
X1 7.2MHz
R CH
L CH
TUNED
STEREO
MONO
SIGNAL
+12V
GND
PLL DATA
PLL CLOCK
PLL STROBE
FM
TUNE
J6
WH1
WH2
12.6V
10.8V
2V
1.5V
0V
2.9V
2.7V
2.3V
3.1V
2.5V
2.6V
5.9V
9.1V
9.2V
4.4V
11.4V
11.9V
12.6V
5.2V
1.2V
1.1V
2.8V
0.2V
1.6V
12.5V
9.4V
9.6V
3.7V
2.1V
2.4V
3V
2.2V

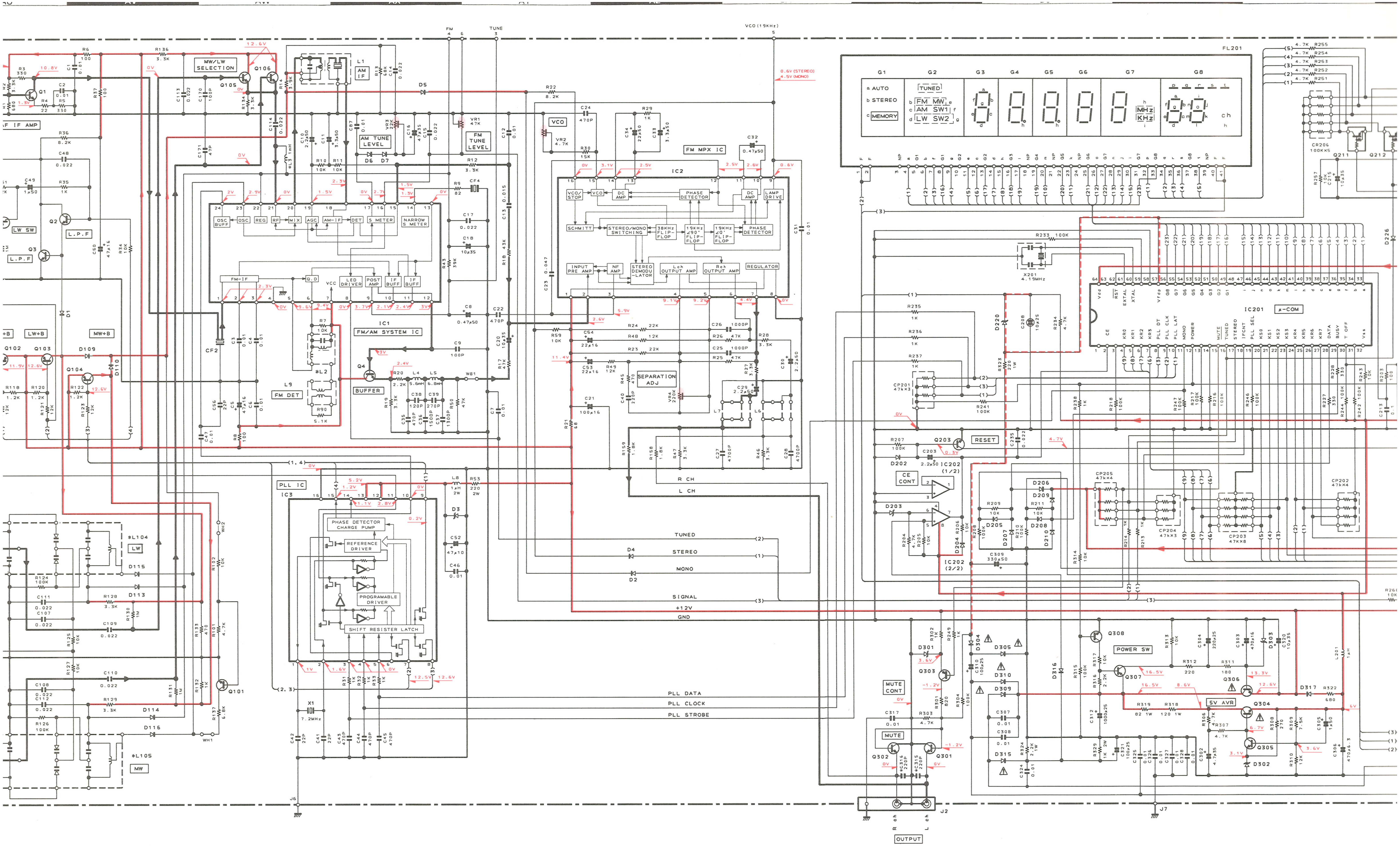
IC1	:LA1266
IC2	:AN7470
IC3	:LM7001
IC201	:CXP5016-534S
IC202	:XRA10393
IC203	:LB1433N
IC204	:M5223P
IC205	:NJM78L05A

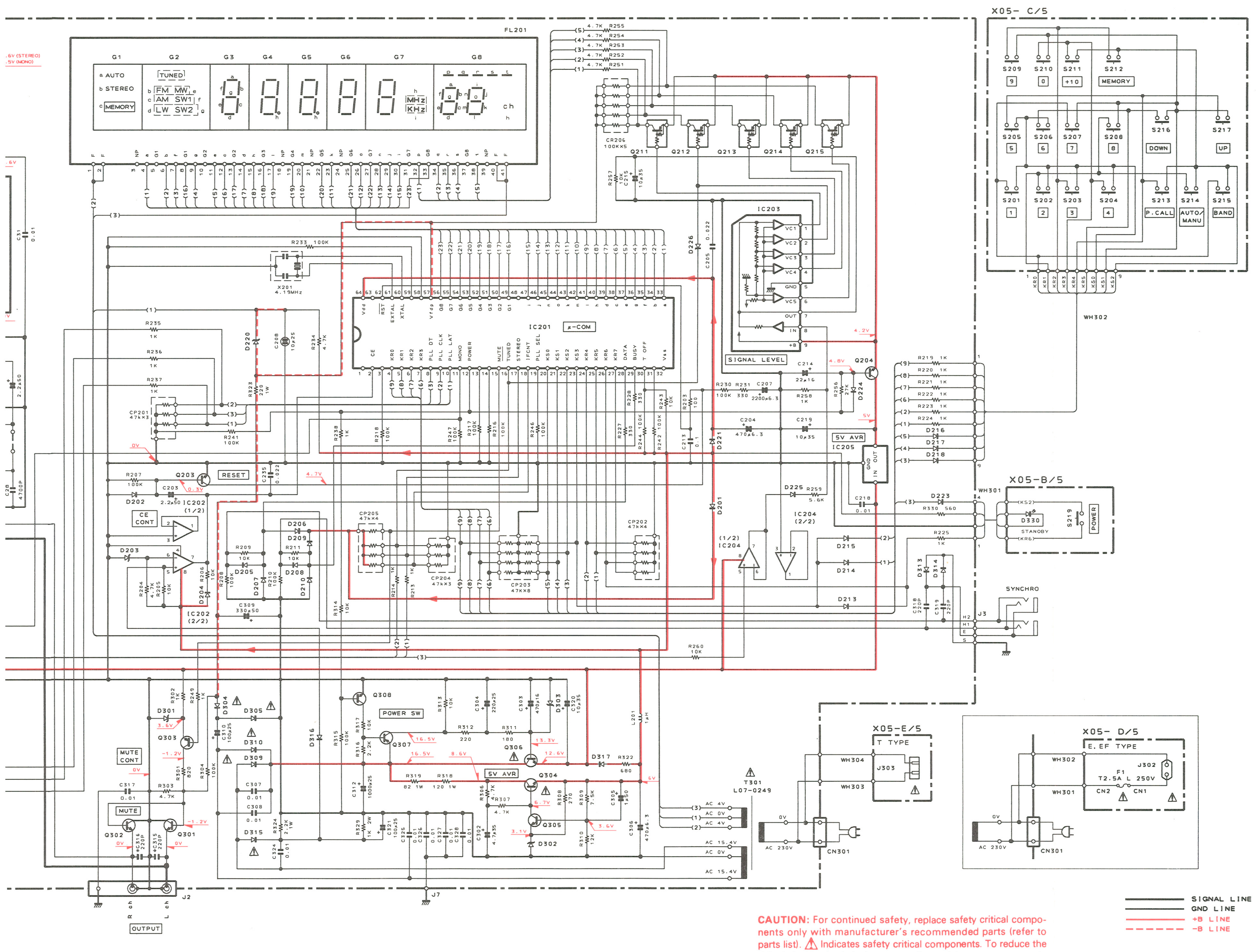
Q1	:2SC1923 (R, $\overline{\text{O}}$)
Q2	:2SC1845 (F, E)
Q3, 4, 101, 105, 106 203, 204, 305, 308	:2SC1740S (Q, R) or 2SC2785 (F, E)
Q5	:2SK364 (GR, BL)
Q102~104, 303 307	:2SA1175 (F, E) or 2SA933S (Q, R)
Q211~215	:DTA124ES
Q301, 302	:2SD1302 (S, T)
Q304	:2SC2003 (L, K)
Q306	:2SD2012 or 2SD2061 or 2SD2374

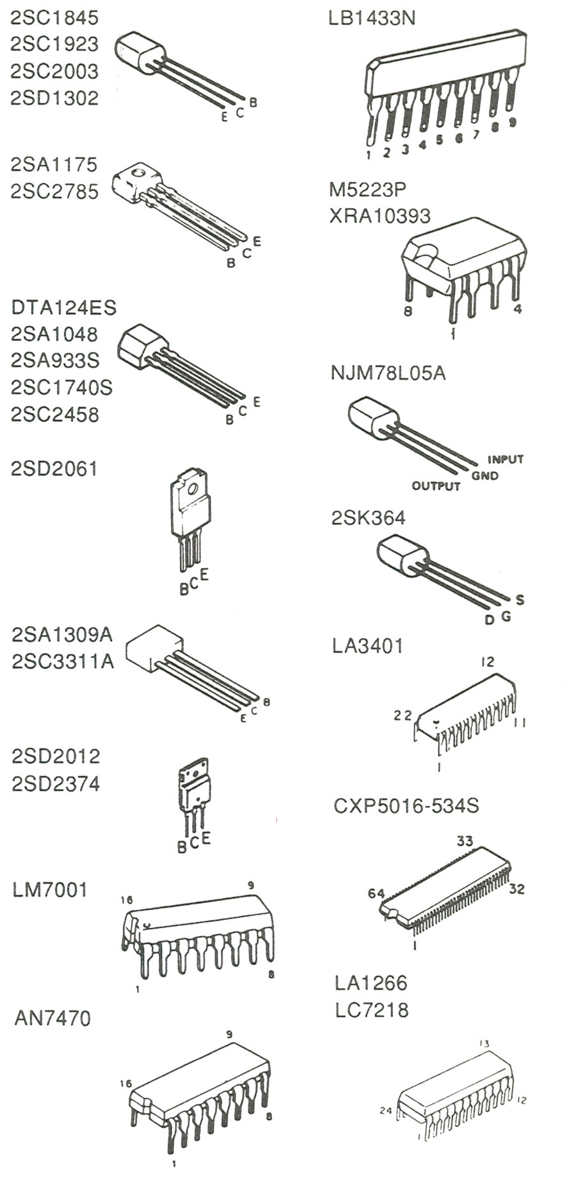
D1, 2, 4~7 109~116, 201 202, 204~210 213~218, 221 223~226, 313~317	:1SS104 or HSS133
D3, 220	:HZS5.1N (B2) or RD5.1ES (B2)
D203	:HZS3.9N (B2) or RD3.9ES (B2)
D301	:HZS3.3N (B2) or RD3.3ES (B2)
D302	:HZS2.7N (B2) or RD2.7ES (B2)
D303	:HZS13N (B2) or RD13ES (B2)
D304, 305	:1SS131 or HSS104A
D309, 310	:S5688B or 1SR139-100

FL201	:CF1022C

COUNTRY	ABB	REF.NO UNIT NAME	C315, 316	L2	L3	L104	L105
EUROPE	E	2-71	YES	L30-0494-05	YES	L39-0195-05	L39-0192-05
	EF	2-72	YES	L30-0484-05	NO	L39-0189-05	NO
ENGLAND	T	0-51	NO	L30-0494-05	NO	L39-0189-05	NO


IF AMP
MW/LW SELECTION
Q105
Q106
L1
AM IF
D5
FM
TUNE
VCO (19KHz)
0.6V (STEREO)
4.5V (MONO)
VR1 47K
FM TUNE LEVEL
AM TUNE LEVEL
VR3
VR2 4.7K
VCO
FM MPX IC
IC2
VCO/STOP
DC AMP
PHASE DETECTOR
LAMP DRIVE
SCHMITT
STEREO/MONO SWITCHING
38KHz FLIP-FLOP
19KHz ∠90° FLIP-FLOP
19KHz ∠0° FLIP-FLOP
INPUT PRE AMP
NF AMP
STEREO DEMODULATOR
Lch OUTPUT AMP
Rch OUTPUT AMP
REGULATOR
SEPARATION ADJ
OSC BUFF
OSC
REG
RF
MIX
AGC
AM-IF
DET
S METER
NARROW S METER
FM-IF
Q.D
LED DRIVER
POST AMP
IF BUFF
IC1
FM/AM SYSTEM IC
BUFFER
Q4
FM DET
L9
CF2
LW SW
L.P.F
Q1
Q2
Q3
LW+B
MW+B
Q102
Q103
Q104
D109
D110
D1
PLL IC
IC3
PHASE DETECTOR CHARGE PUMP
REFERENCE DRIVER
PROGRAMABLE DRIVER
SHIFT RESISTER LATCH
X1 7.2MHz
J6
*L104 LW
*L105 MW
D113
D114
D115
D116
Q101
WH1
WH2
R CH
L CH
TUNED
STEREO
MONO
SIGNAL
+12V
GND
PLL DATA
PLL CLOCK
PLL STROBE
D4
D2
FL201
G1 G2 G3 G4 G5 G6 G7 G8
a AUTO
b STEREO
c MEMORY
TUNED
FM MW
AM SW1
LW SW2
MHz
KHz
ch
IC201
μ-COM
X201 4.19MHz
Q211
Q212
CR206 100K×5
CP201 47K×3
CP202 47K×4
CP203 47K×8
CP204 47K×3
CP205 47K×4
Q203
RESET
IC202 (1/2)
IC202 (2/2)
CE CONT
D202
D203
D204
D205
D206
D207
D208
D209
D210
D220
D226
MUTE CONT
MUTE
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
POWER SW
5V AVR
D301
D302
D303
D304
D305
D309
D310
D315
D316
D317
J2
J7
R ch
L ch
OUTPUT


FL201
G1
G2
G3
G4
G5
G6
G7
G8
a AUTO
b STEREO
c MEMORY
TUNED
FM
MW
AM
SW1
LW
SW2
MHz
KHz
IC201
μ-COM
X201
4.19MHz
IC203
SIGNAL LEVEL
IC205
5V AVR
IC202 (1/2)
IC202 (2/2)
IC204 (1/2)
IC204 (2/2)
RESET
CE CONT
MUTE CONT
MUTE
POWER SW
5V AVR
X05- C/5
X05-B/5
X05-E/5
X05- D/5
T TYPE
E. EF TYPE
WH301
WH302
WH303
WH304
J302
J303
CN301
T301
L07-0249
F1
T2.5A L 250V
SYNCHRO
J3
J2
J7
OUTPUT
STANDBY
POWER
S219
S209
S210
S211
S212
MEMORY
S205
S206
S207
S208
S216
S217
DOWN
UP
S201
S202
S203
S204
S213
S214
S215
P.CALL
AUTO/MANU
BAND
AC 230V
AC 4V
AC 0V
AC 15.4V
Q211
Q212
Q213
Q214
Q215
Q203
Q204
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308


2SC1845
2SC1923
2SC2003
2SD1302
2SA1175
2SC2785
DTA124ES
2SA1048
2SA933S
2SC1740S
2SC2458
2SD2061
2SA1309A
2SC3311A
2SD2012
2SD2374
LM7001
AN7470
LB1433N
M5223P
XRA10393
NJM78L05A
INPUT
GND
OUTPUT
2SK364
LA3401
CXP5016-534S
LA1266
LC7218
E
C
B
D
G
S

DC voltages are as measured with a high impedance voltmeter during reception of the FM broadcast signal (with a singal strength of 60 dB at the ANT terminal). Values may vary slightly due to variations between individual instruments or/and units. Values in parentheses are as measured during reception of the AM broadcast signal (with a signal strength of 60 dB at the ANT terminal).

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance pendant la réception d'un signal de programme FM (avec une force de signal de 60 dB à la borne ANT). Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les valeurs entre parenthèses doivent être mesurées pendant la réception d'un signal de programme AM avec une force de signal de 60 dB à la borne ANT).

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser bei Empfang eines UKW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die eingeklammerten Gleichspannungswerte wurden bei Empfang eines MW-Signals (mit einer Feldstärke von 60 dB am Antennenanschluß) gemessen.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

━━ SIGNAL LINE
━━ GND LINE
━━ +B LINE
– – – -B LINE

Y07-3582-70

KT-1050L

KENWOOD

PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
		*	H50-0522-04	ITEM CARTON CASE		
-			H10-3819-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
614	2B		J02-0366-15	FOOT		
616	1A		J19-2815-04	ANTENNA HOLDER		
⚠ 618	1C		J42-0083-05	POWER CORD BUSHING		
A	1B		N09-2805-05	TAPTITE SCREW		
B	1A,1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
C	1B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
625	1A		T90-0174-05	LOOP ANTENNA		
626	1B		T90-0182-15	LEAD WIRE ANTENNA		

KT-1050L (SINGAPORE MADE)

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
601	1A	*	A01-3024-01	METALLIC CABINET		
602	2A	*	A60-0334-02	PANEL		
603	2A	*	A22-1606-01	SUB PANEL		
605	2A	*	B10-1959-03	FRONT GLASS		
607	2A		B19-1518-04	LIGHTING BOARD		
608	2A		B43-0287-04	KENWOOD BADGE		
-			B46-0122-23	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-		*	B58-0945-03	CAUTION CADE	T	
-		*	B60-1116-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-1117-00	INSTRUCTION MANUAL (F,G,D,I,S)	E	
610	1B		E30-0505-05	AUDIO CORD		
⚠ 611	1C		E30-2592-15	AC POWER CORD	E	
⚠ 611	1C	*	E30-2721-05	AC POWER CORD	T	
612	1B	*	E30-2733-05	CORD WITH PLUG		
		*	H50-0556-04	ITEM CARTON CASE	E	
		*	H50-0557-04	ITEM CARTON CASE	T	
-			H10-3819-02	POLYSTYRENE FOAMED FIXTURE	E	
-		*	H10-5476-02	POLYSTYRENE FOAMED FIXTURE	T	
-		*	H10-5477-02	POLYSTYRENE FOAMED FIXTURE	T	
-			H25-0223-04	PROTECTION BAG (750X350X0.03)	E	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	E	
-			H25-0651-04	PROTECTION BAG (0232 PRINTED)	T	
-		*	H25-0652-04	PROTECTION BAG (0223 PRINTED)	T	
614	2B		J02-1024-05	FOOT		
616	1A		J19-2815-04	ANTENNA HOLDER		
⚠ 618	1C		J42-0083-05	POWER CORD BUSHING		
A	1B		N09-2805-05	TAPTITE SCREW		
B	1A,1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
C	1B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
625	1A		T90-0174-05	LOOP ANTENNA		
626	1B		T90-0175-05	T TYPE ANTENNA		
627	1A		T90-0185-05	ANTENNA ADAPTOR		

KT-1050L (FRANCE MADE)

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
601	1A	*	A01-3024-01	METALLIC CABINET		
602	2A	*	A60-0334-02	PANEL		
603	2A	*	A22-1606-01	SUB PANEL		
605	2A	*	B10-1959-03	FRONT GLASS		

L:Scandinavia **K:**USA **P:**Canada
Y:PX(Far East, Hawaii) **T:**England **E:**Europe
Y:AAFES(Europe) **X:**Australia **M:**Other Areas

1: KT-1050L **S:** SINGAPORE MADE
5: KT-593S **F:** FRANCE MADE
J: JAPAN MADE **W:** MALAYSIA MADE
⚠ indicates safety critical components.

KT-593/593S/1050L

PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
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607	2A		B19-1518-04	LIGHTING BOARD		
608	2A		B43-0287-04	KENWOOD BADGE		
-			B46-0122-23	WARRANTY CARD		
-		*	B60-1116-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-1117-00	INSTRUCTION MANUAL (F,G,D,I,S)		
610	1B		E30-0505-05	AUDIO CORD		
⚠ 611	1C		E30-2592-15	AC POWER CORD		
612	1B	*	E30-2733-05	CORD WITH PLUG		
		*	H50-0568-04	ITEM CARTON CASE		
-			H10-3781-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
614	2B		J02-1024-05	FOOT		
616	1A		J19-2815-04	ANTENNA HOLDER		
⚠ 618	1C		J42-0083-05	POWER CORD BUSHING		
A	1B		N09-2805-05	TAPTITE SCREW		
B	1A,1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
C	1B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
625	1A		T90-0153-05	LOOP ANTENNA		
626	1B		T90-0175-05	T TYPE ANTENNA		
627	1A		T90-0185-05	ANTENNA ADAPTOR		
KT-593, KT-1050L TUNER UNIT (X05-436X-XX)						
D330			B30-1289-05	LED(LN21CPSLX(V)-(C))		
C1 -4			CK45FF1H103Z	CERAMIC 0.010UF Z		
C5			CE04KW1C470M	ELECTRO 47UF 16WV		1F
C5			CE04KW1C470M	ELECTRO 47UF 16WV	Y	J
C5			CE04LW1C470M	ELECTRO 47UF 16WV		
C6 ,7			CK45FF1H103Z	CERAMIC 0.010UF Z		
C8			CE04KW1HR47M	ELECTRO 0.47UF 50WV		1F
C8			CE04KW1HR47M	ELECTRO 0.47UF 50WV	Y	J
C8			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C9			CC45FSL1H101J	CERAMIC 100PF J		
C10			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		1F
C10			CE04KW1H2R2M	ELECTRO 2.2UF 50WV	Y	J
C10			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C11			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		1F
C11			CE04KW1H3R3M	ELECTRO 3.3UF 50WV	Y	J
C11			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C13			CQ92FM1H153J	MYLAR 0.015UF J		
C14 ,15			CK45FF1H223Z	CERAMIC 0.022UF Z		
C16			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		1F
C16			CE04KW1V4R7M	ELECTRO 4.7UF 35WV	Y	J
C16			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C17			CK45FF1H223Z	CERAMIC 0.022UF Z		
C18			CE04KW1V100M	ELECTRO 10UF 35WV		1F
C18			CE04KW1V100M	ELECTRO 10UF 35WV	Y	J
C18			CE04LW1V100M	ELECTRO 10UF 35WV		
C20			CE04KW1V100M	ELECTRO 10UF 35WV		1F
C20			CE04KW1V100M	ELECTRO 10UF 35WV	Y	J
C20			CE04LW1V100M	ELECTRO 10UF 35WV		
C21			CE04KW1C101M	ELECTRO 100UF 16WV		1F
C21			CE04KW1C101M	ELECTRO 100UF 16WV	Y	J

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C21			CE04LW1C101M	ELECTRO 100UF 16WV		
C22			CK45FB1H471K	CERAMIC 470PF K		
C23			CF92FV1H473J	MF 0.047UF J		
C24			CC93FCH1H471J	CERAMIC 470PF J		
C25 ,26			CC45FSL1H151J	CERAMIC 150PF J		5
C25 ,26			CK45FB1H102K	CERAMIC 1000PF K		1
C27 ,28			CQ92FM1H123J	MYLAR 0.012UF J	YX	5
C27 ,28			CQ92FM1H223J	MYLAR 0.022UF J	KP	5
C27 ,28			CQ92FM1H472J	MYLAR 4700PF J		1
C29 ,30			CE04KW1H010M	ELECTRO 1.0UF 50WV	Y	J
C29 ,30			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		1F
C29 ,30			CE04LW1H010M	ELECTRO 1.0UF 50WV		5
C29 ,30			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		1S
C31			CK45FF1H103Z	CERAMIC 0.010UF Z		
C32			CE04KW1HR47M	ELECTRO 0.47UF 50WV		1F
C32			CE04KW1HR47M	ELECTRO 0.47UF 50WV	Y	J
C32			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C33			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		1F
C33			CE04KW1H3R3M	ELECTRO 3.3UF 50WV	Y	J
C33			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		
C34			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		1F
C34			CE04KW1H2R2M	ELECTRO 2.2UF 50WV	Y	J
C34			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C35			CK45FB1H471K	CERAMIC 470PF K		1
C36			CQ92FM1H152J	MYLAR 1500PF J		1
C37			CQ92FM1H132J	MYLAR 1300PF J		1
C38			CC45FSL1H121J	CERAMIC 120PF J		1
C39			CC45FSL1H271J	CERAMIC 270PF J		1
C40			CC45FSL1H221J	CERAMIC 220PF J		1
C41 ,42			CC45FCH1H220J	CERAMIC 22PF J		
C43 -45			CK45FB1H471K	CERAMIC 470PF K		
C46 ,47			CK45FF1H103Z	CERAMIC 0.010UF Z		
C48			CQ92FM1H223J	MYLAR 0.022UF J		
C49			CE04KW1H010M	ELECTRO 1.0UF 50WV	Y	J
C49			CE04LW1H010M	ELECTRO 1.0UF 50WV		5
C49			C90-1349-05	NP-ELEC 1UF 50WV		1
C50			CE04KW1C470M	ELECTRO 47UF 16WV		1F
C50			CE04KW1C470M	ELECTRO 47UF 16WV	Y	J
C50			CE04LW1C470M	ELECTRO 47UF 16WV		
C51			CE04KW1H010M	ELECTRO 1.0UF 50WV		1F
C51			CE04KW1H010M	ELECTRO 1.0UF 50WV	Y	J
C51			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C52			CE04KW1A470M	ELECTRO 47UF 10WV		1F
C52			CE04KW1A470M	ELECTRO 47UF 10WV	Y	J
C52			CE04LW1A470M	ELECTRO 47UF 10WV		
C53 ,54			CE04KW1C220M	ELECTRO 22UF 16WV		1F
C53 ,54			CE04LW1C220M	ELECTRO 22UF 16WV		1S
C56			CC45FSL1H220J	CERAMIC 22PF J		
C87			CK45FF1H103Z	CERAMIC 0.010UF Z		1
C106			CE04KW1C470M	ELECTRO 47UF 16WV		1F
C106			CE04KW1C470M	ELECTRO 47UF 16WV	Y	J
C106			CE04LW1C470M	ELECTRO 47UF 16WV		
C107			CK45FF1H223Z	CERAMIC 0.022UF Z		5
C107,108			CK45FF1H223Z	CERAMIC 0.022UF Z		1
C109,110			C91-0085-05	CERAMIC 0.022UF N		1

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KT-593/593S/1050L

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C111-113			CK45FF1H223Z	CERAMIC 0.022UF Z		1
C114			C91-0085-05	CERAMIC 0.022UF N		1
C135,136			CQ92FM1H562J	MYLAR 5600PF J	Y	5
C170			C91-0745-05	CERAMIC 100PF K		1
C171			C91-0737-05	CERAMIC 47PF J		1
C203			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		1F
C203			CE04KW1H2R2M	ELECTRO 2.2UF 50WV	Y	J
C203			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C204			CE04KW0J471M	ELECTRO 470UF 6.3WV		1F
C204			CE04KW0J471M	ELECTRO 470UF 6.3WV	Y	J
C204			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C205			CK45FF1H223Z	CERAMIC 0.022UF Z		
C207			CE04KW0J222M	ELECTRO 2200UF 6.3WV		1F
C207			CE04KW0J222M	ELECTRO 2200UF 6.3WV	Y	J
C207			CE04LW0J222M	ELECTRO 2200UF 6.3WV		
C208			C90-1332-05	NP-ELEC 10UF 25WV		
C213			CF92FV1H104J	MF 0.10UF J		
C214			CE04KW1C220M	ELECTRO 22UF 16WV		1F
C214			CE04LW1C220M	ELECTRO 22UF 16WV		1S
C215			CE04KW1V100M	ELECTRO 10UF 35WV		1F
C215			CE04LW1V100M	ELECTRO 10UF 35WV		1S
C218			CK45FF1H103Z	CERAMIC 0.010UF Z		1
C219			CE04KW1V100M	ELECTRO 10UF 35WV		1F
C219			CE04LW1V100M	ELECTRO 10UF 35WV		1S
C235			CK45FF1H223Z	CERAMIC 0.022UF Z		
C302			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		1F
C302			CE04KW1V4R7M	ELECTRO 4.7UF 35WV	Y	J
C302			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C303			CE04DW1C471M	ELECTRO 470UF 16WV		1F
C303			CE04DW1C471M	ELECTRO 470UF 16WV	Y	J
C303			CE04EW1C471M	ELECTRO 470UF 16WV		
C304			CE04KW1E221M	ELECTRO 220UF 25WV		1F
C304			CE04KW1E221M	ELECTRO 220UF 25WV	Y	J
C304			CE04LW1E221M	ELECTRO 220UF 25WV		
C305			CE04KW1H010M	ELECTRO 1.0UF 50WV		1F
C305			CE04KW1H010M	ELECTRO 1.0UF 50WV	Y	J
C305			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C306			CE04KW0J471M	ELECTRO 470UF 6.3WV		1F
C306			CE04KW0J471M	ELECTRO 470UF 6.3WV	Y	J
C306			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C307,308			CK45FF1H103Z	CERAMIC 0.010UF Z		
C309			CE04KW1H331M	ELECTRO 330UF 50WV		1F
C309			CE04KW1H331M	ELECTRO 330UF 50WV	Y	J
C309			CE04LW1H331M	ELECTRO 330UF 50WV		
C310			CE04KW1E101M	ELECTRO 100UF 25WV		1F
C310			CE04KW1E101M	ELECTRO 100UF 25WV	Y	J
C310			CE04LW1E101M	ELECTRO 100UF 25WV		
C312			CE04KW1E102M	ELECTRO 1000UF 25WV		1F
C312			CE04KW1E102M	ELECTRO 1000UF 25WV	Y	J
C312			CE04LW1E102M	ELECTRO 1000UF 25WV		
C315,316			C91-0749-05	CERAMIC 220PF K	E	1
C317			CK45FF1H103Z	CERAMIC 0.010UF Z		
C318,319			C91-0749-05	CERAMIC 220PF K		
C320			CE04KW1V100M	ELECTRO 10UF 35WV		1F
C320			CE04KW1V100M	ELECTRO 10UF 35WV	Y	J

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C320			CE04LW1V100M	ELECTRO 10UF 35WV		
C321			CE04KW1E101M	ELECTRO 100UF 25WV		1F
C321			CE04KW1E101M	ELECTRO 100UF 25WV	Y	J
C321			CE04LW1E101M	ELECTRO 100UF 25WV		
C324			CK45FF1H103Z	CERAMIC 0.010UF Z		5
C324,325			CK45FF1H103Z	CERAMIC 0.010UF Z		1
C326-328			C91-0769-05	CERAMIC 0.01UF K		1
J1			E20-0321-05	LOCK TERMINAL BOARD ANTENNA		1
J1			E20-0476-05	LOCK TERMINAL BOARD ANTENNA		5
J2			E13-0235-05	PHONO JACK OUTPUT		1F
J2			E13-0235-05	PHONO JACK OUTPUT	Y	J
J2			E63-0013-05	PHONO JACK OUTPUT		S
J3			E11-0188-05	MINIATURE PHONE JACK SYNCHRO		
⚠ J301			E03-0119-05	AC OUTLET	KPY	S
⚠ J301			E03-0119-05	AC OUTLET	KP	W
⚠ J301			E03-0119-05	AC OUTLET	Y	J
⚠ J302			E03-0108-05	AC OUTLET	E	1
⚠ J303			E03-0109-05	AC OUTLET	T	1S
⚠ F1			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	1
CN1 ,2			J13-0075-05	FUSE CLIP	E	1
CF1 ,2			L72-0531-05	CERAMIC FILTER		5
CF1 ,2			L72-0536-05	CERAMIC FILTER		1
CF4			L72-0096-05	CERAMIC FILTER		
L1			L30-0488-05	AM IFT		
L2			L30-0439-25	FM IFT	KP	5
L2			L30-0484-05	FM IFT		1F
L2			L30-0494-05	FM IFT		1S
L2			L30-0494-05	FM IFT	YX	5
L3			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)	T	1
L4			L40-5625-20	SMALL FIXED INDUCTOR(5.6MH,J)		1
L4			L40-5625-29	SMALL FIXED INDUCTOR(5.6MH,J)		1
L5			L40-6825-20	SMALL FIXED INDUCTOR(6.8MH,J)		1
L5			L40-6825-29	SMALL FIXED INDUCTOR(6.8MH,J)		1
L6 ,7			L79-0790-05	LC FILTER		1
L8			L40-1091-17	SMALL FIXED INDUCTOR		
L9			L30-0485-05	FM IFT		1
L104			L39-0189-05	COMBINATION COIL	KPYX	5
L104			L39-0195-05	COMBINATION COIL	T	1
L105			L39-0192-05	COMBINATION COIL	T	1
L106			L40-1091-17	SMALL FIXED INDUCTOR		
L201			L40-1091-17	SMALL FIXED INDUCTOR		
⚠ T301			L07-0247-05	POWER TRANSFORMER	KP	5
⚠ T301			L07-0248-05	POWER TRANSFORMER	Y	5
⚠ T301			L07-0249-05	POWER TRANSFORMER	X	5
⚠ T301			L07-0249-05	POWER TRANSFORMER		1
X1			L77-1122-05	CRYSTAL RESONATOR 7.200MHz		
X201			L78-0209-05	RESONATOR 4.194MHz		
X201			L78-0267-05	RESONATOR 4.194MHz		
CP201			R90-0832-05	MULTI-COMP 4.7KX3 J 1/6W		
CP202			R90-0487-05	MULTI-COMP 47KX4 J 1/6W		

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CP203			R90-0804-05	MULTI-COMP 47KX8 J 1/4W		
CP204			R90-0850-05	MULTI-COMP 100KX3 J 1/6W		
CP205			R90-0809-05	MULTI-COMP 10KX4 J 1/6W		
CP206			R90-0855-05	MULTI-COMP 100KX5 J		1
R53			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R318			RS14KB3D121J	FL-PROOF RS 120 J 2W		
R319			RS14KB3A820J	FL-PROOF RS 82 J 1W		
R321			R92-0173-05	RC 2.2M M 1/2W	KP	5
R323			RS14KB3A221J	FL-PROOF RS 220 J 1W		
R324			RS14KB3A222J	FL-PROOF RS 2.2K J 1W		
R329			RS14KB3D102J	FL-PROOF RS 1.0K J 2W		
VR1			R12-3688-05	TRIMMING POT.(47K) FM TUNE		
VR2			R12-1619-05	TRIMMING POT.(4.7K) VCO ADJ		
VR3			R12-3686-05	TRIMMING POT.(22K) AM TUNE		
VR4			R12-5652-05	TRIMMING POT.(220K) SEPARATION		1
S101			S31-2094-05	SLIDE SWITCH ch SPACE	Y	5
S201-217			S40-1064-05	PUSH SWITCH KEY BOARD		
S219			S40-1064-05	PUSH SWITCH POWER		
⚠ S301			S31-2131-05	SLIDE SWITCH VOLTAGE SELECTOR	Y	5
D1 ,2			HSS104	DIODE		1S
D1 ,2			1SS133	DIODE		1S
D2			HSS104	DIODE		5
D2			1SS133	DIODE		5
D3			HZS5.1N(B2)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D4 -7			HSS104	DIODE		1
D4 -7			1SS133	DIODE		1
D4 ,5			HSS104	DIODE		5
D4 ,5			1SS133	DIODE		5
D109-116			HSS104	DIODE		1
D109-116			1SS133	DIODE		1
D111,112			HSS104	DIODE		5
D111,112			1SS133	DIODE		5
D201,202			HSS104	DIODE		
D201,202			1SS133	DIODE		
D203			HZS3.9N(B2)	ZENER DIODE		
D203			RD3.9ES(B2)	ZENER DIODE		
D204-210			HSS104	DIODE		
D204-210			1SS133	DIODE		
D213-218			HSS104	DIODE		1
D213-218			1SS133	DIODE		1
D213,214			HSS104	DIODE	X	5
D213,214			1SS133	DIODE	X	5
D214			HSS104	DIODE	Y	5
D214			1SS133	DIODE	Y	5
D216-218			HSS104	DIODE		5
D216-218			1SS133	DIODE		5
D220			HZS5.1N(B2)	ZENER DIODE		
D220			RD5.1ES(B2)	ZENER DIODE		
D221			HSS104	DIODE	KPX	5S
D221			HSS104	DIODE	KP	5W
D221			HSS104	DIODE		1
D221			1SS133	DIODE	KPX	5S
D221			1SS133	DIODE	KP	5W

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D221			1SS133	DIODE		1
D221-223			HSS104	DIODE	Y	5
D221-223			1SS133	DIODE	Y	5
D223			HSS104	DIODE	KPX	5S
D223			HSS104	DIODE	KP	5W
D223			1SS133	DIODE	KPX	5S
D223			1SS133	DIODE	KP	5W
D223-226			HSS104	DIODE		1
D223-226			1SS133	DIODE		1
D301			HZS3.3N(B2)	ZENER DIODE		
D301			RD3.3ES(B2)	ZENER DIODE		
D302			HZS2.7N(B2)	ZENER DIODE		
D302			RD2.7ES(B2)	ZENER DIODE		
D303			HZS13N(B2)	ZENER DIODE		
D303			RD13ES(B2)	ZENER DIODE		
D304,305			HSS104A	DIODE		
D304,305			1SS131	DIODE		
D309,310			S5688B	DIODE		
D309,310			1SR139-100	DIODE		
D313-317			HSS104	DIODE		
D313-317			1SS133	DIODE		
FL201			CF1022C	INDICATOR TUBE		
IC1			LA1266	IC(AM/FM IF)		
IC2			AN7470	IC(FM MPX)		
IC3			LM7001	IC(PLL FREQUENCY SYNTHESIZER)		
IC201			CXP5016-534S	IC(4BIT MICROPROCESSOR)		
IC202			XRA10393	IC(DUAL COMPALATOR)		
IC203			LB1433N	IC(LEVEL METER DRIVER)		1
IC204			M5223P	IC(OP AMP X2)		1
IC205			NJM78L05A	IC(VOLTAGE REGULATOR/ +5V)		1
Q1			2SC1923(R,O)	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q3			2SC1740S(Q,R)	TRANSISTOR		5
Q3			2SC2458(Y,GR)	TRANSISTOR	Y	J
Q3			2SC2785(F,E)	TRANSISTOR		5
Q3			2SC3311A(Q,R)	TRANSISTOR	Y	J
Q3 ,4			2SC1740S(Q,R)	TRANSISTOR		1S
Q3 ,4			2SC2785(F,E)	TRANSISTOR		1S
Q5			2SK364(GR,BL)	FET		1
Q101			2SC1740S(Q,R)	TRANSISTOR		1S
Q101			2SC2785(F,E)	TRANSISTOR		1S
Q102			2SA1048(Y,GR)	TRANSISTOR	Y	J
Q102			2SA1175(F,E)	TRANSISTOR		5
Q102			2SA1309A(Q,R)	TRANSISTOR	Y	J
Q102			2SA933S(Q,R)	TRANSISTOR		5
Q102-104			2SA1175(F,E)	TRANSISTOR		1S
Q102-104			2SA933S(Q,R)	TRANSISTOR		1S
Q104			2SA1048(Y,GR)	TRANSISTOR	Y	J
Q104			2SA1175(F,E)	TRANSISTOR		5
Q104			2SA1309A(Q,R)	TRANSISTOR	Y	J
Q104			2SA933S(Q,R)	TRANSISTOR		5
Q105,106			2SC1740S(Q,R)	TRANSISTOR		1S
Q105,106			2SC2785(F,E)	TRANSISTOR		1S
Q202			2SA1048(Y,GR)	TRANSISTOR	Y	J
Q202			2SA1175(F,E)	TRANSISTOR	Y	5S

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KT-593/593S/1050L

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Q202			2SA1309A(Q,R)	TRANSISTOR	Y	J
Q202			2SA933S(Q,R)	TRANSISTOR	Y	5S
Q203			2SC1740S(Q,R)	TRANSISTOR		5
Q203			2SC2458(Y,GR)	TRANSISTOR	Y	J
Q203			2SC2785(F,E)	TRANSISTOR		5
Q203			2SC3311A(Q,R)	TRANSISTOR	Y	J
Q203,204			2SC1740S(Q,R)	TRANSISTOR		1S
Q203,204			2SC2785(F,E)	TRANSISTOR		1S
Q211-215			DTA124ES	DIGITAL TRANSISTOR		1
Q301,302			2SD1302(S,T)	TRANSISTOR		
Q303			2SA1048(Y,GR)	TRANSISTOR	Y	J
Q303			2SA1175(F,E)	TRANSISTOR		
Q303			2SA1309A(Q,R)	TRANSISTOR	Y	J
Q303			2SA933S(Q,R)	TRANSISTOR		
Q304			2SC2003(L,K)	TRANSISTOR		
Q304			2SC2003(L,K)	TRANSISTOR	Y	J
Q305			2SC1740S(Q,R)	TRANSISTOR		
Q305			2SC2458(Y,GR)	TRANSISTOR	Y	J
Q305			2SC2785(F,E)	TRANSISTOR		
Q305			2SC3311A(Q,R)	TRANSISTOR	Y	J
Q306			2SD2012	TRANSISTOR		
Q306			2SD2012	TRANSISTOR	Y	J
Q306			2SD2061	TRANSISTOR		
Q306			2SD2061	TRANSISTOR	Y	J
Q306			2SD2374	TRANSISTOR		
Q307			2SA1048(Y,GR)	TRANSISTOR	Y	J
Q307			2SA1175(F,E)	TRANSISTOR		
Q307			2SA1309A(Q,R)	TRANSISTOR	Y	J
Q307			2SA933S(Q,R)	TRANSISTOR		
Q308			2SC1740S(Q,R)	TRANSISTOR		
Q308			2SC2458(Y,GR)	TRANSISTOR	Y	J
Q308			2SC2785(F,E)	TRANSISTOR		
Q308			2SC3311A(Q,R)	TRANSISTOR	Y	J
DT1			W02-1041-15	FM FRONT-END ASSY		1
DT1			W02-1042-15	FM FRONT-END ASSY		5

KT-593S TUNER UNIT (X05-4380-20)

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D330			B30-1289-05	LED(LN21CPSLX(V)-(C))		
C1 -4			CK45FF1H103Z	CERAMIC 0.010UF Z		
C5			CE04KW1C470M	ELECTRO 47UF 16WV		J
C5			CE04LW1C470M	ELECTRO 47UF 16WV		S
C6 ,7			CK45FF1H103Z	CERAMIC 0.010UF Z		
C8			CE04KW1HR47M	ELECTRO 0.47UF 50WV		J
C8			CE04LW1HR47M	ELECTRO 0.47UF 50WV		S
C9			CC45FSL1H101J	CERAMIC 100PF J		
C10			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		J
C10			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		S
C11			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		J
C11			CE04LW1H3R3M	ELECTRO 3.3UF 50WV		S
C12			CK45FF1H223Z	CERAMIC 0.022UF Z		
C13			CQ92FM1H223J	MYLAR 0.022UF J		
C14 ,15			CK45FF1H223Z	CERAMIC 0.022UF Z		
C16			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		J
C16			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		S

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C17			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C18			CE04KW1C101M	ELECTRO	100UF	16WV		J
C18			CE04LW1C101M	ELECTRO	100UF	16WV		S
C20			CE04KW1V100M	ELECTRO	10UF	35WV		J
C20			CE04LW1V100M	ELECTRO	10UF	35WV		S
C21			CE04KW1C101M	ELECTRO	100UF	16WV		J
C21			CE04LW1C101M	ELECTRO	100UF	16WV		S
C27 ,28			CQ92FM1H133J	MYLAR	0.013UF	J		
C29 ,30			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		J
C29 ,30			CE04LW1H2R2M	ELECTRO	2.2UF	50WV		S
C41			CC45FCH1H220J	CERAMIC	22PF	J		
C42			CC45FCH1H270J	CERAMIC	27PF	J		
C43 -45			CK45FB1H471K	CERAMIC	470PF	K		
C46			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C47			C91-0769-05	CERAMIC	0.01UF	K		
C49			CE04KW1H010M	ELECTRO	1.0UF	50WV		J
C49			CE04LW1H010M	ELECTRO	1.0UF	50WV		S
C50			CE04KW1C470M	ELECTRO	47UF	16WV		J
C50			CE04LW1C470M	ELECTRO	47UF	16WV		S
C51			CE04KW1H010M	ELECTRO	1.0UF	50WV		J
C51			CE04LW1H010M	ELECTRO	1.0UF	50WV		S
C52			CE04KW1A470M	ELECTRO	47UF	10WV		J
C52			CE04LW1A470M	ELECTRO	47UF	10WV		S
C56			CC45FSL1H220J	CERAMIC	22PF	J		
C62 -64			CE04KW1H010M	ELECTRO	1.0UF	50WV		J
C62 -64			CE04LW1H010M	ELECTRO	1.0UF	50WV		S
C65			CE04KW1HR22M	ELECTRO	0.22UF	50WV		J
C65			CE04LW1HR22M	ELECTRO	0.22UF	50WV		S
C66			CE04KW1V100M	ELECTRO	10UF	35WV		J
C66			CE04LW1V100M	ELECTRO	10UF	35WV		S
C67 ,68			CC45FSL1H101J	CERAMIC	100PF	J		
C69			CE04KW1V100M	ELECTRO	10UF	35WV		J
C69			CE04LW1V100M	ELECTRO	10UF	35WV		S
C70			CK45FB1H561K	CERAMIC	560PF	K		
C71			CQ92FM1H103J	MYLAR	0.010UF	J		
C81			CQ92FM1H223J	MYLAR	0.022UF	J		
C82			CE04KW1H010M	ELECTRO	1.0UF	50WV		J
C82			CE04LW1H010M	ELECTRO	1.0UF	50WV		S
C83			CK45FB1H471K	CERAMIC	470PF	K		
C85			CC45FSL1H101J	CERAMIC	100PF	J		
C86			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C106			CE04KW1C470M	ELECTRO	47UF	16WV		J
C106			CE04LW1C470M	ELECTRO	47UF	16WV		S
C108			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C110			C91-0085-05	CERAMIC	0.022UF	N		
C112,113			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C114			C91-0085-05	CERAMIC	0.022UF	N		
C135,136			CQ92FM1H682J	MYLAR	6800PF	J		
C152,153			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C154,155			CE04KW1H010M	ELECTRO	1.0UF	50WV		J
C154,155			CE04LW1H010M	ELECTRO	1.0UF	50WV		S
C156-159			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C160,161			C91-0085-05	CERAMIC	0.022UF	N		
C162,163			CK45FF1H223Z	CERAMIC	0.022UF	Z		
C164			CC93FCH1H272J	CERAMIC	2700PF	J		

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C166			CC45FCH1H120J	CERAMIC 12PF J		
C167			C91-1431-05	CERAMIC 6800PF J		
C168			CK45FF1H223Z	CERAMIC 0.022UF Z		
C169			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C169			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C171			C91-0745-05	CERAMIC 100PF K		
C203			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		J
C203			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		S
C204			CE04KW0J471M	ELECTRO 470UF 6.3WV		J
C204			CE04LW0J471M	ELECTRO 470UF 6.3WV		S
C205			CK45FF1H223Z	CERAMIC 0.022UF Z		
C207			CE04KW0J222M	ELECTRO 2200UF 6.3WV		J
C207			CE04LW0J222M	ELECTRO 2200UF 6.3WV		S
C208			C90-1332-05	NP-ELEC 10UF 25WV		
C213			CF92FV1H104J	MF 0.10UF J		
C235			CK45FF1H223Z	CERAMIC 0.022UF Z		
C302			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		J
C302			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		S
C303			CE04DW1C471M	ELECTRO 470UF 16WV		J
C303			CE04EW1C471M	ELECTRO 470UF 16WV		S
C304			CE04KW1E221M	ELECTRO 220UF 25WV		J
C304			CE04LW1E221M	ELECTRO 220UF 25WV		S
C305			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C305			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C306			CE04KW0J471M	ELECTRO 470UF 6.3WV		J
C306			CE04LW0J471M	ELECTRO 470UF 6.3WV		S
C307,308			CK45FF1H103Z	CERAMIC 0.010UF Z		
C309			CE04KW1H331M	ELECTRO 330UF 50WV		J
C309			CE04LW1H331M	ELECTRO 330UF 50WV		S
C310			CE04KW1E101M	ELECTRO 100UF 25WV		J
C310			CE04LW1E101M	ELECTRO 100UF 25WV		S
C312			CE04KW1E102M	ELECTRO 1000UF 25WV		J
C312			CE04LW1E102M	ELECTRO 1000UF 25WV		S
C317			CK45FF1H103Z	CERAMIC 0.010UF Z		
C318,319			CC45FSL1H221J	CERAMIC 220PF J		
C320			CE04KW1V100M	ELECTRO 10UF 35WV		J
C320			CE04LW1V100M	ELECTRO 10UF 35WV		S
C321			CE04KW1E101M	ELECTRO 100UF 25WV		J
C321			CE04LW1E101M	ELECTRO 100UF 25WV		S
C324			CK45FF1H103Z	CERAMIC 0.010UF Z		
J1			E20-0476-05	LOCK TERMINAL BOARD ANTENNA		
J2			E13-0235-05	PHONO JACK OUTPUT		J
J2			E63-0013-05	PHONO JACK OUTPUT		S
J3			E11-0188-05	MINIATURE PHONE JACK SYNCHRO		
⚠ J302			E03-0108-05	AC OUTLET		
7J4		*	F10-0783-14	SHIELDING PLATE		
CF1 ,2			L72-0531-05	CERAMIC FILTER		
L1			L30-0467-05	AM IFT		
L2			L30-0494-05	FM IFT		
L3			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L8			L40-1091-17	SMALL FIXED INDUCTOR		
L105			L39-0192-05	COMBINATION COIL		
L106			L40-1091-17	SMALL FIXED INDUCTOR		
L107			L39-0199-05	COMBINATION COIL		

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L108			L31-0608-05	SW-RF COIL		
L109			L32-0528-05	SW OSCILLATING COIL		
L110			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L201			L40-1091-17	SMALL FIXED INDUCTOR		
⚠ T301			L07-0248-05	POWER TRANSFORMER		
X1			L77-1122-05	CRYSTAL RESONATOR 7.200MHz		
X2			L78-0208-05	RESONATOR 456KHz		
X201			L78-0209-05	RESONATOR 4.194MHz		
X201			L78-0218-05	RESONATOR 4.194MHz		S
X201			L78-0267-05	RESONATOR 4.194MHz		J
CP201			R90-0832-05	MULTI-COMP 4.7KX3 J 1/6W		
CP202			R90-0487-05	MULTI-COMP 47KX4 J 1/6W		
CP203			R90-0804-05	MULTI-COMP 47KX8 J 1/4W		
CP204			R90-0850-05	MULTI-COMP 100KX3 J 1/6W		
CP205			R90-0809-05	MULTI-COMP 10KX4 J 1/6W		
R53			RS14KB3D221J	FL-PROOF RS 220 J 2W		
R318			RS14KB3D121J	FL-PROOF RS 120 J 2W		
R319			RS14KB3A820J	FL-PROOF RS 82 J 1W		
R323			RS14KB3A221J	FL-PROOF RS 220 J 1W		
R324			RS14KB3A222J	FL-PROOF RS 2.2K J 1W		
R329			RS14KB3D102J	FL-PROOF RS 1.0K J 2W		
VR1			R12-3688-05	TRIMMING POT.(47K) FM TUNE		
VR3			R12-3686-05	TRIMMING POT.(22K) AM TUNE		
VR5			R12-6663-05	TRIMMING POT.(330K) SEPARATION		
S101			S31-2094-05	SLIDE SWITCH ch SAPCE		
S201-217			S40-1064-05	PUSH SWITCH KEY BOARD		
S219			S40-1064-05	PUSH SWITCH POWER		
⚠ S301			S31-2131-05	SLIDE SWITCH VOLTAGE SELECTOR		
D3			HZS5.1N(B2)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D11			HSS104	DIODE		
D11			1SS133	DIODE		
D109-112			HSS104	DIODE		
D109-112			1SS133	DIODE		
D114			HSS104	DIODE		
D114			1SS133	DIODE		
D116			HSS104	DIODE		
D116			1SS133	DIODE		
D123-130			HSS104	DIODE		
D123-130			1SS133	DIODE		
D131			KV1260	VARIABLE CAPACITANCE DIODE		
D132-135			HSS104	DIODE		
D132-135			1SS133	DIODE		
D201,202			HSS104	DIODE		
D201,202			1SS133	DIODE		
D203			HZS3.9N(B2)	ZENER DIODE		
D203			RD3.9ES(B2)	ZENER DIODE		
D204-210			HSS104	DIODE		
D204-210			1SS133	DIODE		
D212			HSS104	DIODE		
D212			1SS133	DIODE		
D214			HSS104	DIODE		
D214			1SS133	DIODE		
D216-218			HSS104	DIODE		

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D216-218			1SS133	DIODE		
D220			HZS5.1N(B2)	ZENER DIODE		
D220			RD5.1ES(B2)	ZENER DIODE		
D221-223			HSS104	DIODE		
D221-223			1SS133	DIODE		
D301			HZS3.3N(B2)	ZENER DIODE		
D301			RD3.3ES(B2)	ZENER DIODE		
D302			HZS2.7N(B2)	ZENER DIODE		
D302			RD2.7ES(B2)	ZENER DIODE		
D303			HZS13N(B2)	ZENER DIODE		
D303			RD13ES(B2)	ZENER DIODE		
D304,305			HSS104A	DIODE		
D304,305			1SS131	DIODE		
D309,310			S5688B	DIODE		
D309,310			1SR139-100	DIODE		
D313-317			HSS104	DIODE		
D313-317			1SS133	DIODE		
ED1			CF1022C	INDICATOR TUBE		J
FL201			CF1022C	INDICATOR TUBE		S
IC1			LA1266	IC(AM/FM IF)		
IC3			LC7218	IC(PLL SYNTHESIZER)		
IC4			LA3401	IC(FM MPX)		
IC201			CXP5016-534S	IC(4BIT MICROPROCESSOR)		
IC202			XRA10393	IC(DUAL COMPALATOR)		
Q1			2SC1923(R,O)	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q3			2SC1740S(Q,R)	TRANSISTOR		S
Q3			2SC2458(Y,GR)	TRANSISTOR		J
Q3			2SC2785(F,E)	TRANSISTOR		S
Q3			2SC3311A(Q,R)	TRANSISTOR		J
Q7			2SC1740S(Q,R)	TRANSISTOR		S
Q7			2SC2458(Y,GR)	TRANSISTOR		J
Q7			2SC2785(F,E)	TRANSISTOR		S
Q7			2SC3311A(Q,R)	TRANSISTOR		J
Q8			2SC1845(F,E)	TRANSISTOR		S
Q8			2SC1845(F,E)	TRANSISTOR		J
Q9			2SC1740S(Q,R)	TRANSISTOR		S
Q9			2SC2458(Y,GR)	TRANSISTOR		J
Q9			2SC2785(F,E)	TRANSISTOR		S
Q9			2SC3311A(Q,R)	TRANSISTOR		J
Q101			2SC1740S(Q,R)	TRANSISTOR		S
Q101			2SC2458(Y,GR)	TRANSISTOR		J
Q101			2SC2785(F,E)	TRANSISTOR		S
Q101			2SC3311A(Q,R)	TRANSISTOR		J
Q102-104			2SA1048(Y,GR)	TRANSISTOR		J
Q102-104			2SA1175(F,E)	TRANSISTOR		S
Q102-104			2SA1309A(Q,R)	TRANSISTOR		J
Q102-104			2SA933S(Q,R)	TRANSISTOR		S
Q105,106			2SC1740S(Q,R)	TRANSISTOR		S
Q105,106			2SC2458(Y,GR)	TRANSISTOR		J
Q105,106			2SC2785(F,E)	TRANSISTOR		S
Q105,106			2SC3311A(Q,R)	TRANSISTOR		J
Q110			2SA1048(Y,GR)	TRANSISTOR		J
Q110			2SA1175(F,E)	TRANSISTOR		S
Q110			2SA1309A(Q,R)	TRANSISTOR		J

L:Scandinavia **K:**USA **P:**Canada
Y:PX(Far East, Hawaii) **T:**England **E:**Europe
Y:AAFES(Europe) **X:**Australia **M:**Other Areas

1: KT-1050L **S:** SINGAPORE MADE
5: KT-593S **F:** FRANCE MADE
J: JAPAN MADE **W:** MALAYSIA MADE
⚠ indicates safety critical components.

PARTS LIST

⋇ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位 置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
Q110			2SA933S(Q,R)	TRANSISTOR		S
Q202			2SA1048(Y,GR)	TRANSISTOR		J
Q202			2SA1175(F,E)	TRANSISTOR		S
Q202			2SA1309A(Q,R)	TRANSISTOR		J
Q202			2SA933S(Q,R)	TRANSISTOR		S
Q203			2SC1740S(Q,R)	TRANSISTOR		S
Q203			2SC2458(Y,GR)	TRANSISTOR		J
Q203			2SC2785(F,E)	TRANSISTOR		S
Q203			2SC3311A(Q,R)	TRANSISTOR		J
Q301,302			2SD1302(S,T)	TRANSISTOR		S
Q301,302			2SD1302(S,T)	TRANSISTOR		J
Q303			2SA1048(Y,GR)	TRANSISTOR		J
Q303			2SA1175(F,E)	TRANSISTOR		S
Q303			2SA1309A(Q,R)	TRANSISTOR		J
Q303			2SA933S(Q,R)	TRANSISTOR		S
Q304			2SC2003(L,K)	TRANSISTOR		
Q305			2SC1740S(Q,R)	TRANSISTOR		S
Q305			2SC2458(Y,GR)	TRANSISTOR		J
Q305			2SC2785(F,E)	TRANSISTOR		S
Q305			2SC3311A(Q,R)	TRANSISTOR		J
Q306			2SD2012	TRANSISTOR		
Q306			2SD2061	TRANSISTOR		
Q306			2SD2374	TRANSISTOR		
Q307			2SA1048(Y,GR)	TRANSISTOR		J
Q307			2SA1175(F,E)	TRANSISTOR		S
Q307			2SA1309A(Q,R)	TRANSISTOR		J
Q307			2SA933S(Q,R)	TRANSISTOR		S
Q308			2SC1740S(Q,R)	TRANSISTOR		S
Q308			2SC2458(Y,GR)	TRANSISTOR		J
Q308			2SC2785(F,E)	TRANSISTOR		S
Q308			2SC3311A(Q,R)	TRANSISTOR		J
DT1			W02-1042-15	FM FRONT-END ASSY		

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5: KT-593S **F:** FRANCE MADE
J: JAPAN MADE **W:** MALAYSIA MADE
⚠ indicates safety critical components.

KT-593/593S/1050L

SPECIFICATIONS

KT-593/593S

FM tuner section

Tuning frequency range	87.5 MHz-108 MHz
Usable sensitivity (MONO)	0.95 μV/10.8 dBf
Total harmonic distortion (at 1 kHz 65 dBf input)	
MONO	0.4 %
STEREO	0.5 %
Signal to Noise ratio (at 1 kHz, 65 dBf input)	
MONO	78 dB
STEREO	73 dB
Stereo separation	
1 kHz	40 dB
Alternate channel selectivity (± 400 kHz)	50 dB
Frequency response (30 Hz-15 kHz)	+0.5 dB, -2 dB
Output level/Impedance (at 1 kHz, 75 kHz dev.)	0.6 V/3.3 kΩ

AM tuner section

KT-593

Tuning frequency range	
9 kHz step	531 kHz-1,602 kHz
10 kHz step	530 kHz-1,610 kHz
10 kHz step (U.S.A. and Canada)	530 kHz-1,700 kHz
Usable sensitivity (MONO)	11 μV/(280 μV/m)
Signal to noise ratio (at 30 % mod. 1 mV input)	50 dB
Total harmonic distortion	0.5 %
Output level/Impedance (at 30 % mod. 1 mV input)	0.18 V/3.3 kΩ

KT-593S

Tuning frequency range	
9 kHz step	531 kHz-1,602 kHz
10 kHz step	530 kHz-1,610 kHz
Usable sensitivity	17 μV/(560 μV/m)
SW Tuning frequency range	
SW1	3.2 MHz-7.3 MHz
SW2	9.5 MHz-21.85 MHz

General

Power consumption	10 W
AC outlet	
For U.S.A. and Canada UNSWITCHED	1 (800 W 6.6 A max.)
For U.S. military UNSWITCHED	1 (800 W max.)
For other countries UNSWITCHED	1 (500 W max.)
Dimensions	W: 440 mm (17-5/16") H : 75 mm (2-15/16") D : 264 mm(10-3/8")
Weight (Net)	2.6 kg (5.7 lb)

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

KENWOOD poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

KENWOOD strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

Note

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

KT-1050L

FM tuner section

Tuning frequency range	87.5 MHz-108 MHz
Usable sensitivity (DIN at 75 Ω)	
MONO	0.7 μV
STEREO	22 μV
Total harmonic distortion (DIN at 1 kHz 65.2 dBf input)	
MONO	0.15 %
STEREO	0.4 %
Signal to noise ratio (DIN weighted at 1 kHz, 65.2 dBf input)	
MONO	68 dB
STEREO	63 dB
Stereo separation (DIN)	
1 kHz	48 dB
Selectivity (DIN ±300 kHz)	64 dB
Frequency response (30 Hz-15 kHz)	+0.5 dB, -2 dB
Output level/Impedance (at 1 kHz, 75 kHz dev.)	0.6 V/3.3 kΩ

MW tuner section

Tuning frequency range	531 kHz-1,602 kHz
Usable sensitivity	13 μV/(400 μV/m)
Signal to noise ratio (at 30 % mod. 1 mV input)	50 dB
Total harmonic distortion	0.5 %

LW tuner section

Tuning frequency range	153 kHz-281 kHz
Usable sensitivity	22 μV
Signal to noise ratio (at 30 % mod. 1 mV input)	47 dB
Total harmonic distortion	0.6 %
Output level/Impedance (at 30 % mod. 1 mV input)	0.18 V/3.3 kΩ

General

Power consumption	10 W
AC outlet	
UNSWITCHED	1 (400 W max.)
Dimensions	W: 440 mm H : 79 mm D : 264 mm
Weight (Net)	2.6 kg

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